



OPINION: Want to improve IT's rep inside the company? Learn to make small talk, suggests Virginia Robbins. **PAGE 20**

A lack of interoperability is hampering the use of wireless devices by police, fire and other emergency workers. **PAGE 10**

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Data Mishaps Drive Push for New Rules

Lawmakers call for federal mandates on IT security and privacy in wake of recent breaches

BY JAIKUMAR VIJAYAN

Federal lawmakers, reacting sharply to recent data security breaches at several large companies, are proposing a mix of legislation that could impose new compliance burdens on IT managers — including the need to certify that sensitive personal data is protected.

As a result, companies need to review their information security strategies and ensure that they have adequate technology and procedural measures in place for safeguarding confidential data, responding to incidents and monitoring compliance with corporate policies, according to users, analysts and lawyers.

"Any company out there, whether they're currently regulated or not, needs to be re-evaluating their security and making sure they know what's going on," said Kirk Nahra, a board member of the International Association of Privacy Professionals, a York, Maine-based association of IT security and privacy workers that has members from

“Any company out there needs to be re-evaluating their security and making sure they know what’s going on.”

KIRK NAHRA, BOARD MEMBER, INTERNATIONAL ASSOCIATION OF PRIVACY PROFESSIONALS

more than 1,000 companies.

"This is an issue that's hot and heavy in Congress right now," added a security analyst at a large financial services firm who asked that he not be identified. "Who knows what that will lead to?"

Those kinds of concerns are being fueled by legislative proposals such as one detailed on March 10 by Sen. Jon Corzine (D-N.J.), who said he plans to file a bill that would lead to the creation of federal data-protection standards and require CEOs or chief compliance officers to personally attest that their companies comply with the rules.

Corzine's draft *leg-Data Thefts*, page 57

MORE INSIDE

Bank of America's loss of tape cartridges prods some banks to encrypt data archived on tapes.

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PROACTIVE Security



SPECIAL REPORT

Tired of just reacting to attacks, savvy IT managers are going on the offensive with new tools and techniques to prevent security disasters.

Stories begin on page 35.

ONLINE Take a SANS Institute quiz to evaluate your security preparedness: **QuickLink a5580**

Users Turn to Operational Business Intelligence Tools

Emerging capability promises real-time access to most data

BY HEATHER HAVENSTEIN

To keep up with competitors, enterprises increasingly are demanding operational business intelligence — analytics embedded into processes to handle exceptions and

make real-time decisions.

Several corporate users said last week that they are implementing such techniques as tools emerge from key vendors such as SAS Institute Inc., Information Builders Inc. and Cognos Inc.

Just last month, Briggs & Stratton Corp., a Wauwatosa,

Wis.-based manufacturer of lawn mower and garden tiller engines, began rolling out portal technology from the SAS 9 BI tool set and pairing it with SAS analytical applications. The company is looking for the joint system to provide its employees with BI information embedded in accounting, production and sales processes.

"It is such a hot button for us right now," said Grant Felsing, decision-support manager. *BI Tools*, page 16

ONLINE

For full coverage of business intelligence, go to our Web site: **QuickLink a5580**

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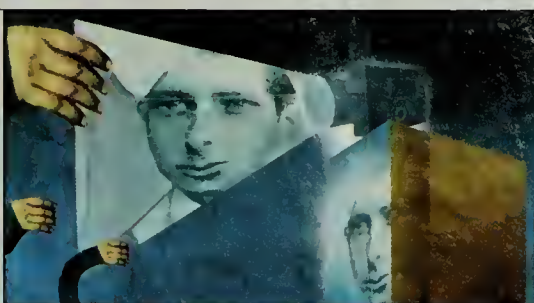
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On some pages in this issue, you'll see a QuickLink code pointing to additional, related content on our Web site. Just enter that code into our QuickLink box, which you'll see at the top of each page on our site.

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KNOWLEDGE CENTER SECURITY

Proactive Security

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Data Points. Download this newest collection of security-related PowerPoint slides for your next presentation.
QuickLink a5570

Opinion: Five tips for engaging the entire organization in the security process, by Diana Kelly, executive security adviser at Computer Associates.
QuickLink 52585

15 Tips for Responsible Computing. The Cutter Consortium Business Technology Council offers strategies for reducing security risks.
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AT DEADLINE

Microsoft to Set VS 2005 Pricing

Microsoft Corp. this week will detail pricing for its Visual Studio application development tool, due to ship in the second half of the year. Licenses range from \$49 for the Express Edition to \$799 for the Professional Edition. Professional Edition costs \$2,499 with a premium MSDN license, and volume licenses for the Team System start at \$3,191.

Oracle, SAP Keep Battling for Retek

Oracle Corp. increased its bid for Retek Inc. to \$630 million late last week, again outbidding rival SAP AG in the tug of war for the retail software maker. SAP had upped its bid to \$616 million in response to Oracle's surprise bid for Retek a week earlier. Retek's board had accepted SAP's second bid prior to Oracle's latest offer.

Oracle CFO Moves To BearingPoint

Oracle Corp.'s chief financial officer, Harry You, has disclosed plans to leave the vendor after eight months on the job. You will become CEO of services company BearingPoint Inc., replacing interim CEO Rod McGeary. You had replaced Jeff Henley in July when Henley became chairman of Oracle's board. Co-president Safra Catz will become acting Oracle CFO.

CA World Is Back On the Calendar

After considering canceling this year's CA World user conference amid management changes last year, Computer Associates International Inc. has put the show back on its calendar, for Nov. 13-17 in Las Vegas. The last show was held in May 2004, three weeks after interim CEO Ken Cron replaced the scandal-tainted Sanjay Kumar. The bid to cancel the show was halted late last year by new CEO John Swainson.

IBM Pays \$1.1B to Acquire Data Integration App Vendor

With Ascential deal, it gets Informix technology it passed over in 2001

BY MARC L. SONGINI

IBM's \$1.1 billion purchase of Ascential Software Corp. has users hoping that IBM will continue investing in Ascential's data integration and management technology.

Ironically, Ascential was created in the aftermath of IBM's 2001 acquisition of the Informix database from the former Informix Corp. IBM also bought the Informix name, so the remainder of the firm — consisting mostly of the data integration technology — was renamed Ascential.

IBM said it hopes to use the Ascential technology to extend its existing WebSphere data integration offerings. The joint portfolio will make it easier for customers to integrate, format and manage information for business intelligence, performance management and other operations, the company claimed.

Westboro, Mass.-based Ascential will be folded into the IBM information manage-

ment software group, headed by general manager Janet Perna. IBM said management moves related to the acquisition will be disclosed once it's completed. The deal is expected to close by midyear.

Wait-and-See Mode

A couple of Ascential users said they aren't yet sure how the acquisition will affect them.

At the very least, IBM brings great size and breadth to the smaller company, whose product portfolio will also likely be enriched by IBM's technology, said Danny Siegel, senior manager in the finance business technology group of Pfizer Global Pharmaceuticals.

"This couldn't be anything but a plus from a client perspective," he said.

However, Siegel also noted that he wants IBM to clarify its plans for continuing development of the Ascential product line and to assure customers that the move is indeed a "true strategic acquisi-

tion." The Pfizer unit uses Ascential's DataStage 7.5 to enable data integration.

Another Ascential customer, Stephen Zander, vice president of enterprise business intelligence services at health care provider McKesson Corp. in San Francisco, added, "I think we need to see some product direction announcements in the next 90 days before I'll be comfortable."

He noted there is overlap in some products, but none that will likely affect Ascential's core customers.

Although IBM left Ascential on the table in its 2001 acquisition of Informix, the two companies formed a strong partnership and today share some 550 joint customers.

In an e-mail, an IBM spokeswoman explained that in 2001, IBM was focused primarily on buying a database and its installed base. Since then, IBM has started a major initiative around information integration.

"They are a fit for us today because now Ascential Software has far more customers and offers richer capabilities for customers at a time when

AT A GLANCE

IBM/Ascential

PRICE: \$1.1 billion

WHAT IT MEANS: IBM gets access to Ascential's data integration, cleansing, management and formatting tools.

WHO'S IN CHARGE: Ascential will become a business unit in IBM's information management software group under general manager Janet Perna.

WHEN THE DEAL CLOSES: In the second quarter of this year.

we are focused on providing integration middleware," she said.

Why IBM didn't buy out Ascential in 2001 isn't clear, but apparently IBM's management believed that integration could be achieved by just enhancing the Web server or database management system, suggested Curt Monash, an analyst at Acton, Mass.-based consultancy Monash Information Services and a *Computerworld* columnist. "Or maybe they just couldn't agree on a price," he said. **53212**

IBM Expects BI Boost From Deal

IBM'S ACQUISITION of Ascential Software is part of the company's new focus on positioning its DB2 database for data warehousing as well as maintaining its traditional stronghold as a transactional database.

IBM hopes to boost its business intelligence market share by utilizing Ascential's extract transform and load (ETL) tools, which are often used today in BI deployments because ETL is the preferred integration method for data warehousing projects.

Ascential's integration suite will complement IBM's Web-

Sphere Information Integrator products, according to IBM. Ascential technology can be used to populate and maintain data warehouses for strategic analysis while tapping IBM's WebSphere integration products to correlate real-time events to information in the data warehouse, said Janet Perna, general manager of IBM's information management software group.

The Ascential acquisition is part of IBM's plan to snag a piece of the growing data warehousing and BI market, with more enterprises demanding ac-

cess to performance data to make tactical decisions, said Philip Russom, an analyst at Forrester Research Inc.

"Since data warehousing is growing faster than transactional databases... it makes sense for them to pursue that market," he said. "The Ascential acquisition will give them a high-quality ETL tool for data warehousing."

IBM in the second quarter of this year plans to release a new Data Warehouse Edition that integrates its DB2 database, DB2 CubeViews metadata bridge, WebSphere data integration tool and its data mining application. IBM has also released

a BI package tailored for law enforcement and is working on packages aimed at the banking and insurance sectors.

Klaus Mikkelsen, global development leader at Ascential user Owens Corning in Toledo, Ohio, said the deal could have a positive long-term impact for his company, given IBM's larger research-and-development resources.

"My biggest concern is around support, which traditionally has been outstanding for Ascential," Mikkelsen said. "I would watch any changes in the support structure with some trepidation."

— Heather Havenstein

Novell CTO Sets Exit Plan on Eve of User Conference

BY CAROL SLIWA

Just days before this week's kickoff of Novell Inc.'s annual BrainShare user conference, its chief technology officer disclosed plans to leave the company at the end of the month to become the general manager of a software business unit at another IT vendor.

The planned departure of CTO Alan Nugent comes on the heels of former No. 2 executive Chris Stone's surprise exit last November [QuickLink 50595]. But several Novell users said they were unfazed by the news that Nugent is following Stone, whose title was vice chairman, out the door.

"So the president and CTO have come and gone. This is just another one," said Jay Hall, unit manager of server engineering at Blue Cross and Blue Shield of Alabama in

Birmingham. "In our opinion, they still have the best technology around, and as long as we believe that's true, we're going to stay with them."

Hall said he supports Novell's Linux strategy as "the only chance they have to get back in the game." His company already is testing the Open Enterprise Server software that Novell shipped earlier this month. OES supports file, print, directory and other computing services on both NetWare and SUSE Linux.

"All of those upper management positions seem to be a revolving door," said Brad Staupp, a senior support analyst at NetWare user Johnson County Community College in Overland Park, Kan. "But I've been a beta tester for six years, and the majority of the people that write the code

All of those upper management positions [at Novell] seem to be a revolving door. But . . . the majority of the people that write the code and do the day-to-day work, they're still there.

.....
BRAD STAUPP, JOHNSON COUNTY COMMUNITY COLLEGE

and do the day-to-day work, they're still there."

Novell hasn't said whether it plans to fill Nugent's or Stone's positions, noted company spokesman Bruce Lowry.

Nugent, who said he joined Novell at Stone's behest in June 2002, stressed that he was happy at the company and that his decision has nothing to do with Stone's exit. He said the new job represents a "fabulous opportunity" to oversee a business unit that is "larger than Novell." Nugent said he was approached by the company, which he declined to identify, and added that he will remain on Novell's payroll until month's end.

Jon Strickland, president of the Triangle Novell Users' Group in Raleigh, N.C., said Stone's departure sparked discussion at a member meeting. But he views Nugent's departure as "par for the course" at Novell. "As long as they keep their general focus — being dedicated to Linux and open-source as well as supporting

their NetWare base — I don't think any customers should show any concern," said Strickland, who is a senior network engineer at Alpha-numeric Systems Inc., a Novell business partner.

Not everyone shares that view, though. A Computer Sciences Corp. employee who works on a contract basis at a large government agency and asked not to be identified said the management changes are "just another indicator that Novell is in trouble."

The agency last November started to replace NetWare with Microsoft Corp.'s Windows Server, partly because of concerns about Novell's long-term direction, according to the contractor. "And the sad thing is, they have a great product," he said. "I would much rather be on NetWare servers and a NetWare directory than [on] Microsoft."

Q 53251

H-1B Fraud Investigations Are Expected to Increase

Higher application fee earmarks money for probes

BY PATRICK THIBODEAU

Companies that hire H-1B visa holders may soon face a greater risk of being investigated for their treatment of those workers because of changes in the law that are due to take effect this month and additional funding for enforcement by the U.S. Department of Labor.

For now, the number of investigations into H-1B abuses is small. According to Labor Department figures, agency officials conducted 49 investigations into alleged H-1B abuses from the beginning of the government's current fiscal year last October through Jan. 31. In comparison, there were 142 and 118 investigations during the entire 2003 and 2004 fiscal years, respectively.

When Congress approved the Visa Reform Act of 2004

in November, it increased the H-1B application fee by \$2,000 and earmarked \$500 of each payment for antifraud efforts. Immigration attorneys said last week that they expect the Labor Department to increase its scrutiny of the use of H-1Bs after the government begins collecting the new fee.

"We are going to see more investigations, and not only because there is more money allocated for the purpose," said Irina Plumlee, a lawyer at Gardere Wynne Sewell LLP in Dallas. She added that heightened security measures and

the political climate in Congress are also factors.

Frida Glucoft, a partner at Mitchell Silberberg & Knupp LLP in Los Angeles, said the number of investigations over the past few years seems low, "but I think we are going to be seeing more audits."

The message for IT managers who use H-1B workers is to ensure that all of the program's rules are followed to the letter, the attorneys said.

Investigations are typically triggered by complaints from H-1B holders. But the government can also conduct random audits or launch investigations based on information from third-party sources. A typical remedy involves payment of back wages by employers; for example, more than \$2 million was paid to workers in fiscal 2003.

In addition to the antifraud funding, the new law gives federal officials more grounds on which to investigate companies, such as checking compliance with a modified wage-rate system that also is due to take effect this month. That system will allow for greater variances in pay to visa holders.

The government initially capped the number of H-1B visas available for this fiscal year at 65,000, a limit that was reached on Oct. 1 — the first day of the fiscal year. An additional 20,000 visas were supposed to become available on March 8 for foreign workers who hold master's or Ph.D. degrees from U.S. universities, but that process has been delayed pending publication of the rules governing the visas in the Federal Register.

Robert Webber, an immigration attorney in Edina, Minn., said the handling of the new law by the U.S. Citizenship and Immigration Services (USCIS) agency has been an "absolute disaster." The agency "has refused to accept filings by employers for the new H-1B [visas] and, in the process, has created complete confusion," Webber said.

The confusion stems, in part, from a recent USCIS statement saying that the visas would be available to anyone, not just workers with advanced degrees. A spokesman for the agency said that until the rules are published, the exact requirements won't be

known. But he noted that the measure passed by Congress did create an exemption for 20,000 advanced-degree holders. Q 53254

Corrections

The story in last week's News section about the bidding war between SAP AG and Oracle Corp. over Retek Inc. misstated the purchase prices that were being offered by both SAP and Oracle. A corrected version of the story can be read on our Web site at QuickLink 53136.

A story in the March 7 News section ("Tape Mishap Prompts Calls for Disk Backups") included an incomplete title for Time Warner Cable executive Bo Coughlin. He is vice president of the Raleigh (N.C.) Division at Time Warner Cable Commercial Services.

The images that accompanied a March 7 story about the planned Freedom Tower in New York ("Project at World Trade Center Site Puts Advanced Design Tools to Test") were provided by architect Skidmore, Owings & Merrill LLP. But they were rendered by New York-based dbx Inc.

H-1B Investigations

Who conducts them? Officials from the Labor Department's Wage and Hour Division.

Penalties: In most cases, they involve payment of back wages. But civil penalties of \$1,000 to \$35,000 can be assessed per violation, especially if the violation was part of a move to displace a U.S. worker.

BRIEFS

EC OKs Sale of ContentGuard

The European Commission has given Microsoft Corp., Time Warner Inc. and Thomson SA the green light to close their joint acquisition of digital rights management company ContentGuard Inc. in Bethesda, Md. The EC expressed concern last year that approving an attempt by Microsoft and Time Warner to buy ContentGuard would let the firms gain control of the DRM market. The EC approved the deal when Thomson was made a partner.

WebMD Buys Health Care Tools

WebMD Corp. in Elmwood Park, N.J., has acquired HealthShare Technology Inc., a maker of health care decision-support systems and a provider of Web-based tools for hospital quality comparison. It paid \$31 million in cash and will pay an additional \$5 million if financial milestones are achieved during this calendar year.

Beta Begins for Flagship SCO Unix

The SCO Group Inc. said its OpenServer 6 flagship Unix operating system has entered formal beta testing and is expected to ship in May. The product, code-named Legend, is part of a multiyear, multimillion-dollar development effort. The software is said to offer performance and security enhancements and have the ability to integrate with popular open-source technologies.

Verizon Buys 23 Spectrum Licenses

Verizon Wireless will pay \$102.5 million to acquire 23 spectrum licenses and other assets from Leap Wireless International Inc. The deal, expected to close by midyear, will allow Verizon to expand its network into new U.S. markets while increasing its capacity in existing markets.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY GOSSIP BY MARK HALL



SIP Tips VoIP Into Secure . . .

... territory. Or so hope vendors hawking voice-over-IP products and services. Most suppliers of VoIP technology acknowledge the perception that it has security holes. But many feel that the Session Initiation Protocol (SIP), currently winding its way

through the Internet Engineering Task Force's standards process, can help put IT managers' minds at ease. Kevin Fecher, CEO of OpenAir Technologies Inc. in Reston, Va., said he thinks that VoIP's security problems "are overblown." But, he acknowledges, you need to plan and deploy your VoIP network very carefully to ensure that it's secure. Fecher, whose company installs VoIP systems for businesses, says the majority of his customers currently use the H323 protocol, which

is far more complex to manage than SIP is. But SIP is gaining ground, he adds.

SIP's virtues include simple administration and the

ability to handle any media, says Thom O'Connor, a solutions architect at Stalker Software Inc., a messaging technology vendor in Mill Valley, Calif. "Once you establish a connection, you can do anything over it," he says, pointing to uses such

as instant messaging, voice communications and e-mail. SIP also authenticates end users to ensure, for example, that callers or IMers are who they say they are. O'Connor says that with an IP infrastructure, a unified messaging strategy ("What we've all been talking about for 10 years") is finally possible.

John Todd, chief technology officer at VoIP Inc. in Fort Lauderdale, Fla., argues that VoIP is already secure and that there's no threat of someone tapping into your IP phone network. But, he concedes, vendors "are all worried about interception" of calls at an Internet service



FECHER:
VoIP security problems are "overblown."



O'CONNOR:
Unified messaging is finally at hand.

provider's network hub. That's the only place where calls can be snooped, he says.

Partisan election tool becomes . . .

... independent marketing product. The technology that was behind the Democratic Party's record \$185 million fundraising effort during last year's political campaign is leaving the donkey's tent for a broader audience. According to Juan Proaño, president of New York-based Plus Three LP, his company's Arcos 4.0 integrated stack of open-source Web, database and messaging technologies will become available this week to more than liberal politicians. Arcos includes tools to conduct and manage massive e-mail campaigns, and Proaño says the new release improves workflow processes and boosts performance to handle spikes in Web traffic. The software is free, of course — but Plus Three charges between \$150,000 and \$300,000 for setup and customization. Acknowledging that his side lost last fall's presidential election, Proaño nonetheless defends Arcos. "We like to think that the technology held us close," he says. Proaño expects the primary users of the software will be nonprofit organizations, but he says companies with large-scale e-mail needs can also benefit. He adds that Plus Three might consider selling its services to Republicans "on a case-by-case basis."

Stop political (and other) spam . . .

... from reaching your end users. Dan Wallace, vice president of marketing at Digi-Portal Software Inc. in San-

2M
Messages
Arcos 4.0 can
send per hour.

ford, Fla., says his company's release of ChoiceMail Enterprise 3.0 next week "offers an end to the spam arms race." New features include global policies that can override the antispam rules of end users. You

can also use ChoiceMail's administration console to block the IP addresses of spammers, instead of doing that at your firewall — which is trickier to pull off, Wallace claims. The software costs \$65 per user.

Meanwhile, Postini Inc. has taken pity on small and mid-size businesses that are deluged with spam. Redwood City, Calif.-based Postini now offers its antispam service to companies with modest internal IT support. According to Andrew Lochart, director of product marketing, Postini Small Business Edition simplifies the battle against spam. For example, he says, the configuration process for Postini's Enterprise Edition takes 15 steps, whereas the new release requires just two. It starts at \$25 per user annually and is available today.



CAHILL:
Rethink your spam defenses.

Des Cahill, CEO of Habeas Inc. in Mountain View, Calif., suggests that we need to rethink our spam defenses. "The war on spam as we've been fighting it isn't working," he says. Habeas' goal is to make message senders prove themselves as legiti-

mate e-mailers. Habeas establishes an accreditation and reputation score for senders. Its namesake technology creates profiles of senders' practices that can be detected by antispam tools, such as the open-source SpamAssassin 3.1 software due out next month. "We're building the über-whitelist for the Internet — a trust network for e-mail," Cahill says. **53213**

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Data Thefts Prompting IT Security Checks

Stricter rules, encryption among options considered

BY LUCAS MEARIAN

BANK OF America Corp.'s loss of credit card data on some 1.2 million customers, along with other recent security incidents, has renewed interest among some IT executives in encrypting data written to backup tapes. But others maintain that simply following existing data-protection rules can prevent such losses.

Drew West, vice president of engineering services at First

National Bank of Arizona in Phoenix, said his bank is looking into encrypting the data it stores on tape, as well as other methods of increasing data security.

"We will be deploying additional encryption methodologies as well as harder authentication," West said. "There are quite a bit of resources being focused on it."

Rich Mogul, an analyst at Gartner Inc., said recent cases of data loss or identify theft through hacking have definitely accelerated plans at financial services firms to roll out greater data-protection schemes.

"There's a reasonably widespread use of encryption... as well as content-monitoring and -filtering tools," he said. "I think it's the fear factor that's probably driving it more than anything else."

On the other hand, Scott Jefferies, an independent IT consultant who works at a large Wall Street firm, said that any outcry for using complex security techniques such as encrypting data on backup tapes has so far been muted because there is too much processing overhead involved in the technology.

Jefferies, who declined to identify his current client,

Data Security Options

- Encrypt data that's in transit or has been archived.
- Employ content monitoring tools to identify proprietary data in e-mail.
- Review password permissions, access rolls and end-user entitlements.

maintained that adherence to existing security processes can oftentimes eliminate or mitigate security problems. For example, companies need to keep a tighter handle on password permissions and end-user access privileges to prevent theft by disgruntled workers or former employees.

"Things in the news that are huge right now are one-off issues. I don't think they're systemic or point to a pattern or a huge hole necessarily," he said.

Some firms had started encryption efforts before the recent data-theft incidents.

For six months, Boeing Employees Credit Union (BECU) has been encrypting all data written to backup tapes using an appliance from Decru Inc. in Redwood City, Calif., in order to protect against unauthorized access to information that is moved off-site. The Tukwila, Wash.-based credit union uses Iron Mountain Inc. to move 140 tapes every week to a long-term archival site from four main data centers.

Backup Plans

Daniel Chow, IT systems and security engineer at BECU, said Decru's DataFort T-Series storage security appliance adds no latency to his backup process. However, it has caused the Hewlett-Packard Co. disk arrays it is backing up to need rebooting from time to time because HP has yet to certify the DataFort appliance with its servers as EMC Corp. and other storage vendors have done.

"There were technical issues we had to spend a lot of resources to resolve," Chow said. Even so, he said the Decru product has been very reliable for his daily backups, which involve about 4TB of data.

Chow noted that once backup tapes leave a data center, officials can never be positive of their security. "How confident are you that the courier is going to get that tape [to its destination] and not lose it?" he asked.

Bank of America said late last month that it had notified the U.S. Department of Defense and the General Services Administration that "a few" tapes containing account information for customers of the GSA's SmartPay travel cards were missing [QuickLink 52928]. Bank of America spokeswoman Alex Trower did not return calls last week but previously said the tapes were part of a larger shipment of media to a backup data center. She wouldn't say whether the tapes were stolen. **53237**

Wireless Helps on Homeland Security, but IT Gaps Remain

BY MATT HAMBLIN
NEW ORLEANS

The wireless technologies available to police, fire and other emergency workers have improved since the 9/11 terrorist attacks, according to a panel of government officials and vendor executives who spoke at last week's CTIA Wireless 2005 conference.

But they said during the panel discussion and in later interviews that much work remains to be done to improve the interoperability of wireless devices for emergency responders and to set up effective warning systems in the event of another terrorist attack or a natural disaster.

The widespread lack of interoperability among public safety networks is one of the most serious homeland security shortcomings, panelists noted. "It's going to take time to solve that problem, and it's unfortunate," said moderator Christopher Guttman-McCabe,

assistant vice president for regulatory policy and homeland security at the CTIA, the Washington-based trade group that sponsored the conference here.

As an example of the disparities that now exist, the Tennessee Valley Authority has 38 different wireless networks used by various personnel, said one audience member, a communications engineer at the TVA who asked not to be named. The engineer added that 20 of the networks are

“It's going to take time to solve [the interoperability] problem, and it's unfortunate.”

CHRISTOPHER GUTTMAN-MCCABE,
ASSISTANT VICE PRESIDENT, CTIA

now being consolidated into a single one based on Nextel Communications Inc.'s technology. The project with Nextel will hopefully simplify a complex system, although further consolidation would help, he said.

Some police and fire personnel are forced to carry several wireless radios or have to yell through bullhorns at emergency scenes, said Jim Dailey, director of the office of homeland security at the Federal Communications Commission. The problem is political as well as technological, Dailey noted; he and other panelists said that different jurisdictions in large metropolitan areas often want to retain control of their own networks.

Metropolitan regions might be able to increase cooperation among cities and towns by developing Wi-Fi mesh networks for transmitting information, said Ron Sege, president of Tropos Networks

Inc., which has installed outdoor Wi-Fi routers in more than 125 cities nationwide.

The problem with using Wi-Fi for emergency purposes is that the networks operate in unlicensed radio spectrum, which makes them vulnerable to interference, said Guttman-McCabe. But technologies could be developed to prevent such vulnerabilities, he added.

Wireless network operators responded quickly to a call from President Bush for Wireless Priority Service capabilities after Sept. 11, 2001, said John Graves, WPS program director for the Department of Homeland Security's National Communications System unit. WPS lets an emergency responder using a wireless device equipped with a special code be put at the head of the line of wireless calls running over a network, Guttman-McCabe said. **53242**

MORE NEWS ONLINE

EDS teams up with a consulting firm to support mobile virtual network operators: **QuickLink 53246**

BlackBerry users will get access to corporate apps, instant messaging services: **QuickLink 53203**

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*Market share from Gartner Dataquest, Tape Automation Systems Market Shares, 2003, F. Yale, April 2004.

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BRIEFS

Ebbers Found Guilty Of WorldCom Fraud

Former WorldCom Inc. CEO Bernard Ebbers was found guilty on all charges of conspiracy and fraud brought against him in connection with the \$11 billion in accounting misstatements that led to the telecommunications giant's bankruptcy. Ebbers could receive 85 years in jail when he is sentenced June 13. Ebbers' attorney said he plans to appeal the verdict.

IT Manager Gets Sentenced for Hack

An Orange, Calif., IT manager who earlier pleaded guilty to hacking into a previous employer's computer network has been sentenced to five months in prison and ordered to pay \$45,000 in restitution. According to a plea agreement, Mark Erfurt broke into the computer systems of Santa Clara, Calif.-based Manufacturing Electronic Sales Corp. in January 2003. At the time, Erfurt was an employee of an MES competitor, Centaur Corp.

Former Qwest CEO Faces Charges

The U.S. Securities and Exchange Commission has charged former Qwest Communications International Inc. CEO Joseph Nacchio with fraud and other securities-law violations. The commission claims that from 1999 to 2002, Qwest engaged in a complex scheme to improperly record more than \$3 billion in revenue and exclude \$17.3 million in expenses.

Akamai Buys Rival Speedera

Content delivery specialist Akamai Technologies Inc. last week announced that it plans to acquire Santa Clara-based rival Speedera Networks Inc. in an effort to boost its standing against larger managed-services vendors. The \$130 million stock deal is expected to be completed in the second quarter.

Business Process Tools Seen Lifting Profits

Financial services firms look for an edge versus rivals

BY LUCAS MEARIAN

FINANCIAL SERVICES firms will be adopting business process management (BPM) tools and techniques at rates outpacing those of other industries this year, because the efficiencies and cost savings they can create are vital in an industry quickly losing profit margins as products become commodities.

The message hasn't been lost on vendors. For example, EMC Corp. in Hopkinton, Mass., is updating its BPM suite in the latest version of the Documentum enterprise content management platform set to be unveiled today (see story below).

The new EMC tool enters a field crowded with offerings from suppliers like FileNet

Corp., Pegasystems Inc., Tibco Software Inc. and others.

Vendors of such tools can find significant opportunities among banks, brokerages and insurance companies, since these businesses can run more efficiently and boost worker productivity by automating processes, said Peter Redshaw, an analyst at Gartner Inc.

No Need for Paper

One of the drivers of BPM in financial services is the amount of electronic imaging for items such as checks, mortgages and loan applications, Redshaw said, noting that Gartner has found that BPM is spreading quickly among such firms.

Yet Redshaw said banks are moving cautiously for fear of exposing sensitive data on the Web-based applications.

The First National Bank of Arizona said that by rolling out a BPM tool from Ultimus Inc. in Cary, N.C., it was able

“[BPM] saved an enormous amount of production time.”

KAREN SCHEER, OPERATIONS AND TECHNOLOGY BUSINESS LIAISON, FIRST NATIONAL BANK OF ARIZONA

to eliminate 20 paper forms related to access to selected corporate data.

Previously, the bank used numerous paper forms that required multiple signatures for varying levels of authorization.

“It saved an enormous amount of production time having that one-stop shopping versus going onto our Web sites to locate the forms for signatures and then get them signed and follow up manually,” said Karen Scheer, operations and technology business liaison at First National in Phoenix.

Scheer said that creating a

centralized database for all information related to requests, as well as a central online location for requests and approvals, simplified management tasks

By definition, automating manual processes improves customer service, Redshaw said. “Automating things done manually on paper makes things faster, and customer service looks better — like processing a loan application in six days instead of six weeks,” she said.

Regulations Compliance

Sumitomo Mitsui Banking Corp. in Tokyo used the e-Work BPM tool from Metastorm Inc. in Columbia, Md., to facilitate worldwide Basel II and USA Patriot Act compliance. Rise Zaiser, vice president of business applications at Sumitomo Mitsui Bank, said it cost the company less than \$500,000 to set up the system at a data center in New York.

The system automates the process of performing background checks on new banking customers through the U.S. Department of the Treasury's Office of Foreign Assets Control, Zaiser said.

Metastorm's e-Work platform also allowed the bank to create a globally accessible system for tracking customer activity while interfacing with multiple systems to decrease manual input and improve data accuracy for Basel II, which regulates the amount of cash reserves a bank must have.

“It enabled us to not only set up standardized processes to capture information, [but] we can also change the options people have for filling in [data] fields depending where they are in the world. For example, a ZIP code is a term used in the U.S., and a postal code is used in the rest of world,” Zaiser said.

Many of the processes at the bank had previously been performed manually, requiring personnel to stamp or sign forms and then send them to other employees for approval.

Q 53250

EMC Unveils New Documentum Version

EMC today is unveiling a new version of its Documentum content management suite based on a new underlying architecture that the company says can fully integrate individual products in the suite.

Version 5.3 adds a unified architecture that lets each Documentum application share the same code base, leading some analysts to describe the package as a true product suite.

“What's new is that they've now pulled together disparate elements: workflow, rules engines and content management. Now they have a suite of offerings,” said Peter Redshaw, an analyst at Gartner.

EMC is looking for the new version, especially its updated business process management

NEW PRODUCT

EMC Documentum Version 5.3 includes:

- Documentum Client for Outlook
- Documentum Content Transformation Services
- Documentum Collaboration Services
- Documentum Business Process Management
- Documentum Retention Policy Services

tool set, to increase its standing in the financial services industry. “Up until now, we couldn't sell into insurance, financial applica-

tions, mortgage processing or loans,” said Lubor Ptacek, director of product marketing at EMC's Documentum division.

Documentum's Business Process Manager suite can now automate exception handling for things such as bounced checks or questionable invoices.

The new version also includes collaboration tools that can be used to automatically invite appropriate business users into an online Web forum and populate that forum with data related to that business transaction. Then the decision made by business users in the forum automatically triggers settlement of the exception. For example, in the case of an invoice, the tools would authorize payment.

—Lucas Mearian

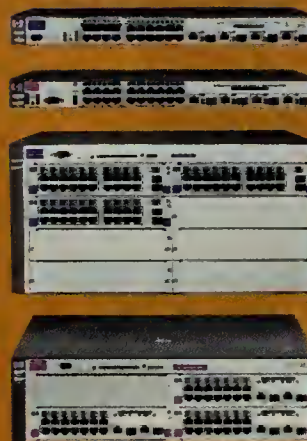


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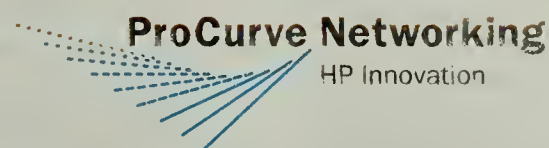
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An International IT News Digest

Opponents May Derail U.K. Biometric ID Card

LONDON

FACING LIKELY DEFEAT in the House of Lords this week, legislation to create a national identity card program is expected to be shelved by U.K. government officials until after the next general election.

The Identity Cards Bill would create by 2010 a system of ID cards with embedded chips that carry personal information and biometric identifiers, all stored in a massive database called the National Identification Register. But government ministers, who expect stiff resistance in the House of Lords, reportedly plan to table the bill and reintroduce it sometime after the May election.

The Identity Cards Bill was approved by the House of Commons in February. Prime Minister Tony Blair has insisted that the ID cards are needed to fight identity fraud, illegal immigration, terrorism and improper use of the National Health System. But critics of the bill have said that the ID

cards would be a violation of privacy rights and that the biometric tests would incorrectly identify individuals 10% to 15% of the time.

■ LAURA ROHDE, IDG NEWS SERVICE

Perot Plans Acquisitions To Boost Global Reach

BANGALORE, INDIA

PEROT SYSTEMS CORP., an IT and business process outsourcing vendor based in Plano, Texas, plans acquisitions in India, Eastern Europe, Russia, China and Mexico to meet customer demands, Chairman Ross Perot Jr. told reporters here last week.

"We do follow our customers, and we have customers who are now in Eastern Europe and China, and they

are asking us to continue to build capabilities there, which we will do," Perot said. "We also have clients who are looking at Mexico and the rest of South America, and we need to build up capacity there, too."

Perot was in India for the company's board meeting, which was held

GLOBAL FACT

72%

Percentage of European IT managers who fear they will lose their job after a security breach.

SOURCE: WEBSense INC. SURVEY OF 500 EUROPEAN IT MANAGERS

for the first time in the country to underscore its importance in the company's strategy. About 4,500 of Perot's 15,000 employees are in India.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Bank in South Africa Adds Cell Phone Access

JOHANNESBURG

FIRST NATIONAL BANK of South Africa, a unit of FirstRand Bank Ltd., recently launched cell-phone-based banking for customers, including those in rural and underserved areas where wireless phones are common but automated teller machines are not.

Cell phone users register for the service and send text via Short Message Service to a five-digit number. To get an account balance, for example, the customer sends a message reading "balance" to phone number 31321. The bank then requires a personal identification number before providing the requested information or transaction.

The fee-based service offers only basic functions, according to the bank, such as the ability to obtain a mini-statement of the past three transactions, get account balances and transfer money between a customer's First National accounts. ☎ 53211

■ NICOLAS CALLEGARI, COMPUTING SOUTH AFRICA

Compiled by Mitch Betts.

Briefly Noted

South Korea's government recently complained that Microsoft Corp.'s software prices can be three times higher in South Korea than in the U.S. A government report said, for example, that Microsoft SQL Server 2000 Enterprise for 25 clients costs 18 million won in Korea – the equivalent of \$17,930 U.S. – but costs \$4,790 in the U.S. A spokesman for Seoul-based Microsoft Korea said that prices are set by retailers.

■ SEUNG EUN MYUNG, IT WORLD KOREA

Vodafone Group PLC, a wireless operator based in Newbury, U.K., will add 5.7 million customers in Eastern Europe with last week's \$3.5 billion acquisition of the Romanian and Czech units of Telesystem International Wireless Inc., which is based in Montreal.

■ LAURA ROHDE, IDG NEWS SERVICE

Microsoft said last week that its stripped-down Windows XP Starter Edition will be launched in India in June, initially in the Hindu language.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Buyout Wave Pushes ASPs Into Deals With Big Vendors

Users anticipate potential benefits of increased efficiencies and lower costs

BY PATRICK THIBODEAU

About a month ago, Mumbai, India-based Mphasis BFL Ltd. contacted Victor Rodriguez, CIO at Carolina Care Plan Inc., to discuss its business process outsourcing (BPO) services. Mphasis officials also asked Rodriguez about Eldorado Computing Inc., which provides the health benefits management system used by the Columbia, S.C., company.

It was the first time Rodriguez had heard from Mphasis, and he suspected that the call was part of an effort to feel out Eldorado's customers

about a potential partnership between the two companies. But it turns out there was more to the call than that.

Last week, Mphasis announced that it has agreed to purchase Phoenix-based Eldorado for \$16.5 million. Although it is a relatively small deal, the acquisition is nonetheless part of an accelerating merger trend in which large IT services vendors are buying application service providers (ASP).

Rodriguez said that at least in the case of the Mphasis/Eldorado deal, he sees poten-

tial benefits for users like him. "We have the possibility for Mphasis and Eldorado to leverage a partnership and bring a more cost-effective organization," he said.

Carolina Care uses Eldorado's Healthware ASP service for its core benefits management application, and the company outsources its claims processing work to a separate BPO vendor. Bringing those two activities together under one vendor may bring some efficiencies and lower costs, Rodriguez said.

He added that he will closely monitor Eldorado's performance and that he thinks its service levels "may take a hit" as the details of the planned acquisition are ironed out. But Rodriguez said he doesn't anticipate any major problems with the ASP.

In a related development,

IBM last week said it had completed a \$182 million acquisition of Corio Inc., a San Carlos, Calif.-based company that deploys and manages ERP and CRM applications. IBM plans to use Corio's operations to broaden the application services portfolio offered by its Global Services unit.

And in January, Sun Microsystems Inc. bought SevenSpace Inc., an Ashburn, Va.-based managed services firm that remotely supports enterprise applications and other technologies on systems from Sun and rival vendors.

Checking the Pulse

ASP customers should "do a pulse check on that relationship," said Meta Group Inc. analyst Dane Anderson, who recommended that IT managers review their service-level agreements and consider

preparing contingency plans in light of the recent acquisition activity.

Joseph Sorisi, CIO at Platform Learning Inc., a New York-based company that provides tutoring services to some 50,000 students around the U.S., said that even in a situation where an IT vendor buys an ASP and wants to move its offerings to a different hardware platform, users should still have some power under their contracts. "The customer has control over the timelines," Sorisi said.

Platform Learning has used hosted software from Nsite Inc. in Pleasanton, Calif., to automate many of its paper-based business processes. Sorisi said the ASP model has saved him from having to hire new IT staffers and to invest in maintaining and supporting applications internally. ☎ 53255

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Continued from page 1

BI Tools

ager at Briggs & Stratton. "Show me those things that are within my area that are not within norms or . . . are heading for a collision course."

For example, the portal can alert accountants that correct accounting procedures are not in place to handle orders as a new engine is set to be shipped, Felsing said. Before the BI was embedded in its processes, the company would have to take orders out of the system, re-enter the correct accounting information and then re-enter orders the next day to ensure that the products would ship correctly, he explained.

Growing Market

SAS, Information Builders and Cognos are among a growing number of vendors making a push into operational BI, said Keith Gile, an analyst at Forrester Research Inc.

"Businesses want to get more value out of all of the

NEW PRODUCT

Information Builders' WebFocus 7

New features include:

- Native access to more than 200 sources of data, including relational and legacy databases, enterprise applications and data warehouses, and operational systems.
- The ability to read data as a Web service.
- Automatic server fail-over if queries exceed capacity.
- Support for query simulation to determine how many servers will be needed for specific queries.

data, not just the data warehouse. Many of the real-time decisions that need to be made must be made while the process is happening, like while the customer is on the phone or when the patient is being treated," Gile said.

New York-based Information Builders earlier this month unveiled WebFocus 7, a BI tool set geared toward providing oper-

ational BI. It includes native access to more than 200 data sources through integration adapters from the vendor's iWay Software subsidiary.

Information Builders and iWay have historically marketed their products separately, but they are now integrating iWay's integration and meta-data management tools into WebFocus 7 to meet a growing market for operational BI, said Michael Corcoran, vice president of Information Builders.

Scheduled to ship next month, WebFocus 7 will provide access to relational and legacy data, data from enterprise applications and data warehouses, and data from operational systems, he said.

Montreal-based Pharmascience Inc., a beta user of WebFocus 7, is hoping that the new integration features will help the pharmaceutical company better manage inventory, said Jonathan Despres, manager of information access.

Now, inventory information can be delayed by as much as a week, Despres said. Linking

WebFocus 7 to the company's SAP data warehouse — a goal of the firm — would allow inventory information to be included in product warehouse businesses process, he said. "If [users] get information delayed by a week, it's almost impossible to reduce the inventory level," he said.

Alaska Airlines Inc. in the past two months has begun deploying business analytics tools from Siebel Systems Inc. in its marketing organization. The tools will be integrated with Alaska Air's customer management system and will incorporate data from Sabre Holdings Corp.'s Sabre reservations system, said James Archuleta, director of CRM at the Seattle-based airline.

The Siebel tools will enable Alaska Air to tie together loyalty program and flight-scheduling databases with a meta-data layer from the Siebel technology. Call center representatives will then have updated customer information in their desktop applications, said Archuleta. **53247**

Group Offers Sarb-Ox Certification Program

Courses target IT, finance personnel

BY THOMAS HOFFMAN

An online community for Sarbanes-Oxley practitioners last week introduced a set of certification courses aimed at determining the proficiencies of IT and accounting professionals around the congressional regulatory mandate.

The Clifton, N.J.-based Sarbanes Oxley Group of Auditors and Professionals, known as SOXGAP, is planning to hold two training workshops in New York, on April 2 and 3.

The first course, called SOXBase, requires that participants pass a qualifying exam that tests their fundamental understanding of the Sarbanes-Oxley Act of 2002, said Sanjay Anand, chairman of the group, which was founded in 2003. A second course, called SOXPro, requires that candidates already have Sarbanes-Oxley experience and proficiencies.

The courses are offered to auditors and nonauditing professionals, including workers from human resources, legal, ethics and other departments who are or expect to become involved in Sarbanes-Oxley-related compliance efforts, according to Anand.

Anand said the group is trying to keep the class size at about 12 to 15 people in order to maintain an acceptable student-to-teacher ratio and to encourage classroom interaction.

The cost of the two-day class is \$2,295.

A second set of classes is being planned for Los Angeles in late October, said Anand. Meanwhile, courses may be added for other U.S. cities this summer based on demand, he said. **53241**

Group Seeks Portfolio Management Answers

IT managers hope to gain insights on cultural issues

BY THOMAS HOFFMAN

IT managers from AAA, Visa, The Boeing Co. and other companies today will hold the inaugural meeting of an association looking to exchange ideas and best practices for IT portfolio management.

The organization, known as the Portfolio Management Council, is being spearheaded by San Retna, chief portfolio officer at San Francisco-based AAA of Northern California, Utah and Nevada. The genesis of the group, said Retna, comes from the need for IT portfolio managers to be able to dive into the "nuts and bolts" of portfolio management strategies and challenges.

For instance, said Retna, at industry conferences, IT portfolio management discussions tend to take a high-level view of the issues. In contrast, he and other members of the council, which also includes representatives from Safeway Inc. and Washington Mutual Inc., plan to explore more day-to-day challenges. That could include discussions of how portfolio management practices can affect staffing, and dealing with the cultural aspects of putting an IT governance committee into place, for example.

"Some organizations have been able to make the cultural changes necessary to put governance councils in place," said Retna. "What can we learn from them?"

Dana Gardner, an analyst at The Yankee Group in Boston and a member of the council,

said he anticipates that the group will broaden IT managers' understanding about how IT and business objectives can be better aligned.

"The goals are to raise the consciousness of enterprises to some of these issues and build some discussion around how to get started," said Gardner.

AT A GLANCE

Portfolio Management Council

Charter: A newly created association whose members (predominantly IT managers) will meet to discuss best practices and share ideas on IT portfolio management strategies.

Members: AAA of Northern California, Utah and Nevada; Washington Mutual; Visa; Hewlett-Packard; Boeing; Safeway; Port of Portland; The Yankee Group

Location: To be determined this week

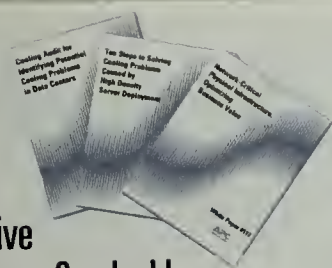
ner. "It's one thing to have a vision and have an end goal; it's another thing to put it into practice."

Gardner said that this is the first IT portfolio management user group he's aware of that isn't being driven by a vendor, a trade group or a market research firm.

Retna said the group intends to tackle four specific areas over the next six to 12 months: determining whether an IT organization has invested in the most-effective IT projects; has the capacity and resources to execute on those projects; has the ability to address the change management aspects associated with IT portfolio management; and can judge whether IT projects are delivering their anticipated returns.

Retna said the group's members plan to discuss in San Francisco this week some of the logistics for the organization, including the naming of officers and how often they intend to meet. **53235**

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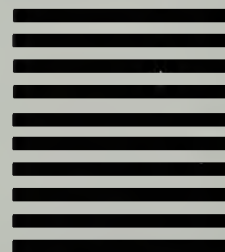
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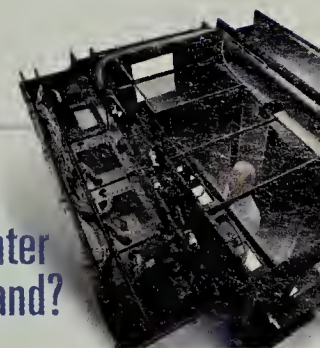


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ISXT280MD40R	40	up to 5kW	\$699,999*	\$21,999**
ISXT2800MD100R	100	up to 5kW	\$1,649,999*	\$50,999**

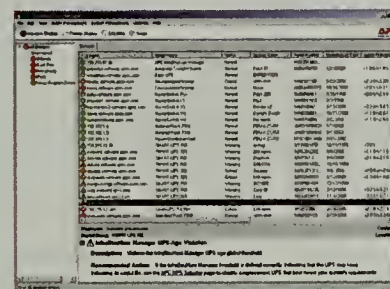
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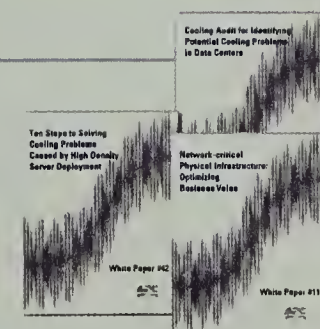
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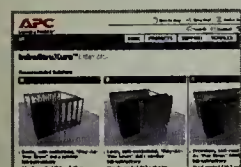
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IT Leaves Tax Savings out of the Equation

BY THOMAS HOFFMAN

Though IT managers continue to be under enormous pressure to cut costs, more than 70% of

U.S. corporations fail to include tax departments in IT procurement decision-making, according to a survey of more than

200 IT and finance executives conducted by Deloitte Consulting and IDC.

Raffi Markarian, a principal

with Deloitte Tax LLP's ERP Integration Services practice in Chicago, last week discussed with Computerworld what steps IT organizations can take to recognize potential tax savings.

Why is the tax function so often overlooked during the IT procurement process? There appears to be a gap between corporate departments, particularly between [the IT and tax departments]. Global 2,000 [companies'] tax departments generally report up to the CFO function, and IT is a different organization in the company, and the two just don't cross paths, which is unfortunate.

As CFOs are more actively involved in IT investment decisions, shouldn't they be aware of the need to include tax in such discussions? They should, and I'm hoping that recent trends of more active CFO involvement bodes well. CFO involvement seems to be a two-pronged approach. [First], they're actively involved in control and Sarbanes-Oxley issues. The second prong is an insistence on return-on-investment and payback scenarios.

Do most IT purchases by corporations qualify for federal or state R&D tax credits? R&D is just one aspect of many different items. I would say that it's probably not a majority but a minority of investments.

What type of investments do qualify for such credits? Generally, IT investments that involve more-sophisticated and novel approaches, such as RFID as an example. Things that are not as ordinary.

What recommendations would you make to IT procurement officers? To include tax in some shape or form in the decision-making process. To include tax considerations as early as possible. Then to ensure that appropriate tax representatives are involved through the life cycle of that project implementation. It's a cause-and-effect kind of thing. Many folks on the IT side aren't aware that every transaction that flows through an IT system has a tax implication somewhere along the line. **Q 53214**



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DON TENNANT

An Awkward Position

THIS IS COMING to you from a creepily dark, scarily tiny guest room at the W Hotel in Manhattan. The dark creepiness is apparently supposed to be very chic and avant-garde, but it doesn't do

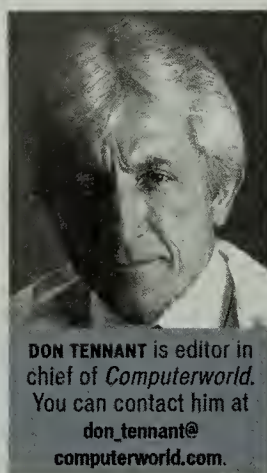
much for me other than give me the willies.

I'm in town to attend the 51st annual Jesse H. Neal National Business Journalism Awards luncheon because *Computerworld* was a finalist for one of these prestigious awards. Having just recently returned from the Premier 100 IT Leaders Conference, where 100 of your peers were honored for their contributions to your profession, it was cool to feel a resurgence of that rush you get from seeing hard work, dedication and talent acknowledged and rewarded.

I couldn't help but compare the two award ceremonies and the professions they honor. I'm sure I was as struck as anyone at the P100 conference by discussions of the sometimes overwhelming challenges that the P100 honorees in general, and the Best in Class award winners in particular, have had to overcome in the course of doing their jobs. IT is, to be sure, a very tough and demanding profession.

As IT journalists, we do our best to imagine walking in your shoes so we can gain an appreciation for what keeps you awake at night. But what do you suppose keeps an IT journalist awake at night? Besides the night sweats stemming from being cooped up in a claustrophobic but oh-so-chic hotel room, I mean.

Sure, there are the constantly looming deadlines, but your profession has those as well. I've found that a real challenge of this job is being in a position in which you have to publicize people's transgressions.



DON TENNANT is editor in chief of *Computerworld*. You can contact him at don_tennant@computerworld.com.

Think about it. That's a fairly awkward, uncomfortable position to be in.

You don't have to be a religious or moral zealot to recognize that there's something to be said for that admonishment about casting the first stone. I'll be honest and say that Barry Bonds, the baseball player, touched a nerve at that press conference last

month when he lashed out at journalists who were hounding him about his use of steroids.

"All of you guys have lied," he told them. "Should you have an asterisk behind your name?"

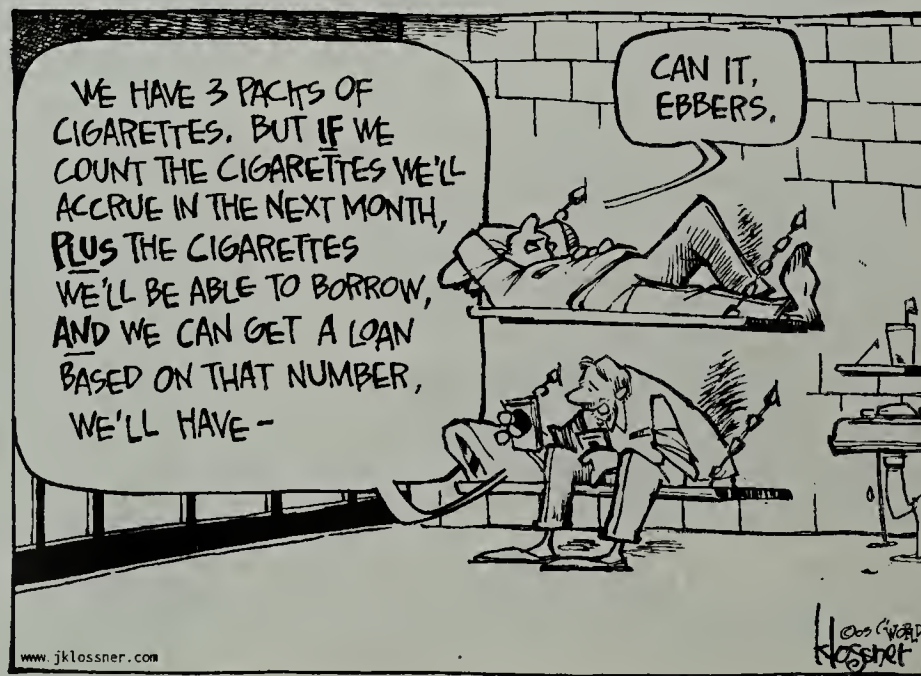
It was a legitimate question. The fact is, there's not a journalist (or an IT professional or anyone else) who hasn't done something that in hindsight he wishes he hadn't done and

that he'd be very happy not to have publicized. That's just a simple fact of life. Yet we publicize other people's wrongdoings all the time.

As I write this, there's a story just hours old on our Web site about the transgressions of Bernie Ebbers, the former WorldCom CEO who was found guilty of fraud and conspiracy [QuickLink a5590]. And another one about Joseph Nacchio, the former Qwest Communications CEO who, according to the SEC, engaged in fraud as well [QuickLink 53207]. Those are important developments that you need to be aware of. But I'll have to leave it to the journalism ethics professors to explain why it's not hypocritical for us to run those stories while not wanting our own goof-ups to be publicized. I'm not sure I have a good answer.

Which is not to say I'm not perfectly happy to publicize the offense of charging \$269 a night for a walk-in closet with a bed, a TV and a desk with a dim light. And who ever heard of naming a hotel "W"? Now that's a transgression. **53216**

Don Tennant



VIRGINIA ROBBINS

Changing IT's Rep Through Small Talk

I JUST SAW another one of those commercials that make fun of the unprofessional IT worker. I'm sure you've seen this one: The Suit comes into the Techie's work area and asks if something can be done by Tuesday, to which the Techie responds unprofessionally. The Suit offers to negotiate for the Techie, and the Techie snaps to and says he'll call a vendor, the commercial's sponsor. The Suit is left confused, the Techie gloating, and the Sponsor looking great.

And IT workers everywhere are left with an image problem.

This month, we also heard from Gartner that CIOs are the lowest of the C-level executives, with a record number of CIOs reporting to non-CEO-level managers. Meanwhile, our trade magazines are filled with IT managers bemoaning how miserable it is to be in the profession. If you get a chance to read magazines aimed at other C-level positions, you'll find that they present a much more positive outlook to their readers. What is it that makes the difference? I

know that most of us act like professionals, and for the most part we like our jobs. But like trial lawyers, we have a stereotypical reputation that is damaging to our profession.

I believe this is the best time to be in IT. Technology is everywhere, and there are more opportunities than ever before. The challenge is finding them.

I came across a great article by Susan RoAne titled "How to Create Your Own Luck: The 'You Never Know' Approach for Turning Serendipity into Success." RoAne is a speaker whose specialty is motivating people to mingle. Don't laugh; I'll explain why this is an important skill. She has spoken at Oracle, Autodesk and other technical and engineering companies.

She lists 10 behaviors for creating your own luck; here are a few that



VIRGINIA ROBBINS is CIO and managing director at Chela Education Financing in San Francisco. Contact her at v_m_robbins@yahoo.com.

I have found the most challenging.

The first and second behaviors are to be open and positive and to observe people who are open, imitating their behaviors, including both what they say and don't say. Open doesn't mean blabbing company secrets. It means using positive storytelling as a way to motivate, connect and share experiences with staff, peers and colleagues. When I first tried this, I found it extremely difficult. It was so much easier to be ironic.

Another behavior is to make small talk. RoAne notes that through small talk, we find out about areas of commonality, which form connections that in turn form business relationships. When RoAne and I spoke last week, she shared a story about two Boeing engineers who worked together for nine years before finding out that they lived in the same neighborhood. Too often, we concentrate on the work at hand and miss opportunities to learn about one another. I wonder how much more we could communicate if we used those few minutes before or after a meeting to find out how the business owner's weekend was or whether he has children.

I'll leave you to read the rest of RoAne's article at www.susanroane.com. Even if you don't agree with all of her recommendations, try one or two that you don't normally do and see whether it makes a difference. I'm not sure this is the answer, but I do know that we need to improve our reputation and create our own opportunities. **53147**

**MICHAEL
GARTENBERG**

In Mobile Computing, Size Matters

CONVENTIONAL wisdom about mobile computing says that end users are willing to carry only one device. This belief has led vendors to race to create the perfect single product. The problem with converged devices, though, is that they require compromises on functionality, and in fact the single-device notion is more myth than reality.

Based on a recent JupiterResearch consumer survey, we know that while users prefer to carry only one device

when that is possible, they are actually willing to carry up to three, based on contextual circumstance. But there's more to the story than that; size is critical, and that's why it's important to break down the form factors for mobile devices into four categories. If you're making decisions about purchasing mobile technology for end users, you must keep these four categories in mind.

■ **Devices that require an additional case.** Any device that requires its own case, like a projector or large laptop computer, means end users must carry a significantly larger load, in terms of both bulk and weight. Because users must make a concerted effort to carry such a device, they will do so only when they need the dedicated functionality.

■ **Devices that are cased with other devices.** These are things that fit into a case that the user is already taking along. If a user is already carrying a bag that holds a laptop, taking several



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smaller items (such as a BlackBerry and cell phone) in the same bag requires little extra effort.

■ **Pocketable devices.** These devices are carried independently, on the person. There's a stark line of demarcation between this category and the two already discussed. A lot of things can go into a laptop case, but there are only so many items that can be carried on the person. As a rule, pocketable devices are worn on the person and are noticeable. As each device is added to the mix, bulk and weight grow significantly. As a result, our research tells us that most users will not carry more

than three devices on their person, and two devices is the sweet spot.

■ **Invisible devices.** This is the most interesting category. Users do not hesitate to carry devices that they perceive as invisible. Watches, wallets and keys all fall into this category. Increasingly, cell phones that are small and light-weight are being perceived by those

who carry them as invisible as well.

What all this means is that vendors are racing in the wrong direction to meet a user need that isn't there. For example, reducing functionality in the interest of making a device smaller is foolish if the device isn't made pocketable. Likewise, increasing functionality while losing the ability to be carried ubiquitously can be wrong as well. IT departments need to be careful when selecting devices for end users, and form and function need to go hand in hand. At the same time, users shouldn't try to sacrifice functionality for the sake of device size. Trying to replace your laptop with a BlackBerry or Treo might be feasible on a day trip, but if you're going for a week and need to update your five-year sales projections, take a real computer with you.

How many devices do you carry on your person and in your bag when you're on the road? In a future column, I'll publish an updated list of the most popular things people take with them and why. **53070**

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READERS' LETTERS

Looking for the IT Leaders of Tomorrow

I AM A RECENT MBA graduate from the University of Michigan Ross School of Business. I often saw top firms visit campus to recruit students for leadership rotational programs in areas such as finance, marketing and strategy. However, only a handful of firms came to recruit MBA students for positions in IT. When I last looked, there were at least 245 leadership rotational programs for graduating MBA students among large U.S. companies, but only 10 of these programs were IT-focused.

In his "Masters of Frustration" editorial [QuickLink 52643], Don Tennant mentioned that he often hears IT executives complain that universities aren't graduating enough students with both IT and management skills. When I talk to faculty who teach technology courses at the B-school, I often hear them complain that companies don't value technology skills in graduating MBA students and hence there isn't sufficient interest in technology courses. Today, IT is the central ner-

vous system of many organizations. As organizations understand this and understand the value of having MBAs in the IT department, we will move closer to the day when CEOs come from the IT function.

Don Tauro
Ann Arbor, Mich.

IMAGINE YOU have heard of Northface University in Utah. Its business is producing graduates tailored to the needs of large IT vendors such as IBM and Oracle. It offers a program that combines business and IT instruction from the students' freshman year on. I believe that this model is more likely to produce what the industry is looking for than changes made by traditional MBA programs.

Scott Peterson
Sandy, Utah

DON TENNANT has sided completely with industry in believing that educators are to blame for the lack of IT managers. This is bull. Time and again, industry fails to

implement a method whereby skilled technologists can effectively move into management through educational initiatives. Yes, quite a few of the "poster children" companies have effective programs, but most don't. I am now in an industry that values knowledge: education.

Brian Nelson
Systems administrator,
Richardson, Texas

Patients' Rights

KYM GILHOLLY'S article regarding electronic health records ["Rx for Better Health Care," QuickLink 51989] doesn't make much mention of what I believe is the largest stumbling block of all: medical data ownership. Patients are able to access "their" records only at the approval of the provider. The benefits to be gained from either full interoperability or actual records consolidation are immense, but as the public becomes aware of such issues as the effect their comprehensive record can have on their insurance or their future care, there will likely be back-

lash. Safeguards such as the ability for patients to review and amend their records will have to be balanced against the ability of providers to honestly and accurately report not only objective test results, but also subjective observations that aren't always available to patients today. Another issue that will have to be addressed sooner rather than later is the ability to easily strip identification data from records to enable medical researchers to benefit as well.

Dave Kristof
San Antonio

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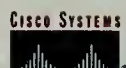


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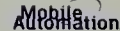
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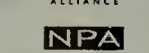
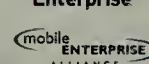
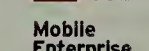


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Security In Business Context

SECURITY GURU Bruce Schneier, in his excellent book *Beyond Fear* (Copernicus Books, 2003), notes that U.S. cybersecurity officials have tried to get American CEOs who are in charge of critical facilities (such as nuclear power plants) to spend big bucks on security, for the good of national security. The appeal to patriotism hasn't worked. "If the CEO of a major company announced that he was going to reduce corporate earnings by 25% to improve security for the good of the nation, he would almost certainly be fired," Schneier says. And rightly so. "Sure, the corporation has to be concerned about national security," Schneier writes, "but only to the point where its cost is not substantial."

The point is that security is a balancing act. We all know there can never be perfect security, and it would be unaffordable if it were possible.

"We can make our systems completely secure only at the expense of infinite cost or zero utility," says another security veteran, consultant William Hugh Murray. "They will be completely secure if we unplug them. They will be completely secure if they have no users or uses. They will be more secure if we do not connect

them to a network."

Of course, the opposite is true. We have more users — including outside trading partners in the supply chain — and more connections to the wide-open Internet and wireless networks.

And the problem isn't imaginary or hype. In a recent survey of 163 large U.S. organizations by Ponemon Institute in Tuscon, Ariz., 122 (or 75%) reported a data security breach in the past 12 months. In many cases, the result was a leak of customer information, employee information or confidential business information.

Tops on the Agenda

Fortunately, security has rocketed to the top of the corporate IT agenda.

Pain Points

Which technology areas are the greatest sources of pain in your organization today?

1. Security
2. Storage
3. Software license management
4. Remote access

BASE: 104 C-LEVEL EXECUTIVES AT U.S. BUSINESSES WITH MORE THAN 100 EMPLOYEES
SOURCE: SAGE RESEARCH INC., NATICK, MASS., JUNE 2004

Almost every survey shows that it is No. 1 on the list of IT concerns and high-priority spending plans. In part, this is because of virus outbreaks such as Blaster and Slammer in 2003, the worst year of malicious code outbreaks in the 20-year history of computer viruses.

The greatest barrier to effective security is an inadequate budget, according to a study by PricewaterhouseCoopers and *CIO* magazine. Prior to the 2003 virus outbreaks, security budgets had been flat, but many IT organizations report more security spending since then. Interestingly, those organizations that exhibit the best practices in IT security management tend to allocate a bigger portion of their budget to information security (14%, compared to 11% for other respondents), the PricewaterhouseCoopers study finds.

Regulatory compliance is causing a lot of security activity, too. Of 229 U.S. organizations surveyed by Enterprise Strategy Group Inc., 73% say regulatory compliance is behind the increase in security investment. (But only 32% of the companies are very confident they would pass the IT security portion of an audit.)

"Governance and compliance issues are still driving the need for information security, with some of the budget coming from compliance initiatives related to Sarbanes-Oxley [Act compliance]," says Joe Duffy, a partner at PricewaterhouseCoopers.

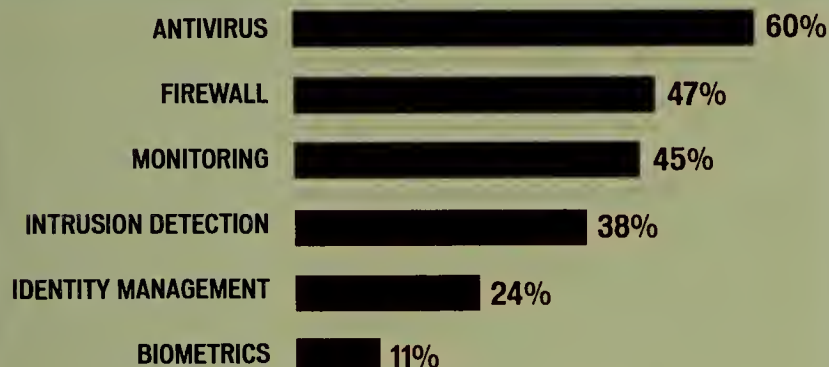
The "best practice" organizations also adopt a long-term view of security investment, versus a one-year-at-a-time planning cycle, according to the PricewaterhouseCoopers and *CIO* study. Moreover, best practice companies were more apt to engage the business units in decision-making about security.

The Security Imperative

So what's the "security imperative" in the title of this report? We have to try hard to protect the company's infor-

Security Plans

Which types of network security products do you plan to buy in the next 12 months?



BASE: 109 network security professionals at U.S. businesses with more than 100 employees; multiple responses allowed

mation assets, but without bankrupting the company or making its systems unusable.

In other words, the goal is security in business context. As security expert Donn B. Parker put it in his book *Fighting Computer Crime* (John Wiley & Sons, 1998): "Business has no patience for excessive, impractical security advice."

That's why this report is full of peer-tested strategies and tips for improving security in business. In the first section, it covers the following topics:

- How to outsource security to managed security services providers — and what questions to ask before you do.
- How to implement an identity

management program.

■ How to protect your corporate systems from remote-access points such as telecommuters.

■ How to thwart insider abuse and plug the security gaps caused by instant messaging.

Perhaps most important is the subsequent section on business issues. You'll learn how to provide — and maybe even strengthen — IT security during a merger or acquisition. Plus, former CIO Doug Lewis provides a brilliant (and politically savvy) way to sell security to the chief financial officer and get the budget you need for a prudent level of security.

Prudent is the key word there. It implies trade-offs — the trade-off between absolute security and affordability. "There is no single correct level of security," Bruce Schneier says in *Beyond Fear*. "How much security you have depends on what you're willing to give up in order to get it."

In the future, Parker says, "The motives and desire for prudent security must come from the business managers, not the security advisers."

"The Security Imperative," offers dozens of tips and strategies for protecting your business from internal and external threats. IT managers tell you how to (safely) outsource security functions, implement identity management, plug instant-messaging gaps and even get a bigger security budget from the CFO! Plus, you'll get tactics for securing telecommuters, who could be your company's weakest security link!

FREE DOWNLOAD: "The Security Imperative"
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How to protect your business systems from internal and external threats

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INTRODUCTION
Security in Business Context

STRATEGIES & TIPS
Outsourcing Security
Implementing Identity Management
Protecting Remote Access
Thwarting Insider Abuse
Plugging IM's Security Gaps

BUSINESS ISSUES
Selling Security to the CFO
Strengthen Security During Mergers

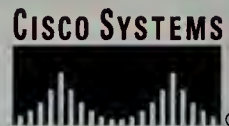
EMERGING TECHNOLOGIES
Web Services Security
Authentication

**2:07PM LOG IN TO HOT SPOT 2:08PM
NETWORK SECURES THIN AIR 2:09PM
TRANSMIT FILES THROUGH THIN AIR
2:25PM UPDATE PURCHASE ORDER
2:35PM EXPENSE COFFEE ORDER**

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MICHAEL MORGENSTERN

Video E-MAIL Goes Corporate

Improvements in video e-mail technology have translated into its adoption by large companies. **BY KATHY CHIN LEONG**

IF JOE BIANCO HAS HIS WAY, movie star Russell Crowe will soon be firing off video e-mails to his fans thanking them for their support. Perhaps the actor/singer will embed clips of his latest recording session along with a personal note of appreciation. It's possible.

Bianco, CEO of New York-based Sheridan Square Entertainment, is so convinced that video e-mail technology is the wave of the future, he has inked a contract with provider First Stream in Irvine, Calif., to outfit his 100 employees with the service. And Sheridan Square, which owns Crowe's label, Artemis Records, will be offering its musicians the opportunity to send video e-mails to admirers.

"There are two reasons why we are very excited about video e-mail," says Bianco. "First, we will be using this for corporate interoffice communications." With offices in four U.S. cities, using video e-mail will cut down flying time substantially, he says. "Second,

our artists can maintain connections with their fans. I anticipate that a heavy metal artist will send a message that will look very different than a folk singer's."

Once dismissed as a gimmick, video e-mail is beginning to make inroads into business communication. As the technology has been refined and costs have been reduced, name-brand corporations have begun to give video e-mail a try.

EARLY DAYS

In the mid-1990s — the early days of video e-mail — the technology was interesting but rough around the edges. PCs had to be beefed up with high-end graphics cards, megabytes of memory and special camera gear. High-speed transmission lines were scarce. Not only was it expensive, but it also was kludgy.

"Back then, video over Internet looked more like a series of fast photographs," says Paul Braun, president

of New York-based VIDISolutions. "Compression was not so good. Big, bulky files came very, very slowly."

Faces looked pasty; voices failed to sync with moving lips. Full-motion video via the Web reminded users of a bad Japanese movie with poor dubbing. But video streaming arrived in the late 1990s, permitting users to view footage without hogging disk space. In video streaming, full-motion images flow through the recipient's computer, but the video data resides on the provider's server, not the user's.

FINDING A HOME

Video e-mail is no longer an orphan technology. Organizations such as the Miami Dolphins football team, DaimlerChrysler AG and Eli Lilly Corp. are relying on video e-mails for ad campaigns, internal announcements and market surveys. These businesses are also using the technology for sales training, public relations, customer updates and product releases.

Ease of use is key to the growing market for video e-mail. First Stream recently announced First Stream Mail 4.0, which can deliver messages via any player platform, be it Java, QuickTime, Flash or Microsoft Media Player. The viewing window in the new release has been enlarged to 3-by-2 in. and can be expanded to a full screen with a single click.

With First Stream, video message senders attach a camera such as Logitech's QuickCam for Notebooks Pro or link an off-the-shelf camcorder to the PC. Next, they activate the video e-mail service and hit the Record button on the screen. After recording, they can embellish the message with text and graphics. Most services operate in a similar fashion, each with variations in multimedia platform, maximum video length and window size. Users generally pay an installation fee and are charged a monthly or annual subscription fee, which can range from \$9.95 to \$100 per seat per month.

Some companies are cutting costs

with video e-mail. Focus group firm BIGresearch LLC uses video e-mail and PC-to-PC videoconferencing technology to gather consumer data. Instead of renting rooms to host focus groups, for the past two years the Worthington, Ohio-based firm has been airing live videoconferences to targeted individuals, who share their opinions remotely via PC. For test panels of 2,000 or more, BIGresearch uses technology from SOS Video Communications in Columbus, Ohio. Panel participants log onto their video e-mail, view the clip of the product and key in responses.

Phil Rist, vice president of strategic initiatives at BIGresearch, notes that savings are vast for his clients, which include Victoria's Secret, S.C. Johnson & Son Inc. and Wal-Mart Stores Inc.

The technology has also proved powerful in business-to-business applications, says Rist. After it conducts a survey, BIGresearch tapes an actor reading a summary of the results. The footage is then condensed into a video e-mail that's sent to the client.

"Some people are not into reading charts and numbers," says Rist. "A video presentation makes it so much easier." A soap manufacturer, for example, can forward that same video e-mail to a department store buyer so he also can understand consumer preferences, he says.

Meanwhile, acceptance is growing on the receiving end of the technology. According to a new study conducted by Osterman Research Inc., more than 50% of corporate users surveyed said they would view a video e-mail if it was sent by someone they knew. Over 38% said they would view video e-mails from people they do business with.

"Firms using video mail as a pull versus a push technology will gain user confidence," says Michael Osterman, president of Osterman Research in Black Diamond, Wash. For instance, he says, if a customer has a question about a product and e-mails the vendor, that vendor can provide an enhanced service by responding with a personalized video greeting.

That is exactly what Chrysler Group sales representative Chris Hanson did when he responded to a woman interested in a Chrysler 300 vehicle. Hanson, based in Hibbing, Minnesota, replied to her questions via video e-mail and told her that the car she wanted was in the showroom. That same day, she drove three hours to purchase the car.

"Adding a face to the e-mail adds a new dimension to your selling," said Hanson. After the transaction, he

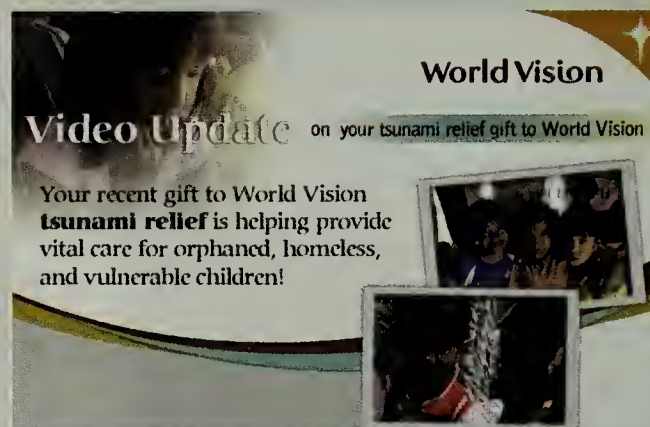
A MOVING PLEA FOR HELP

A MOTHER who has just lost her son in the recent tsunami in Sri Lanka wails into the lenses of rolling cameras. In another scene, in hushed tones, a little girl explains, "Mother went to the shore and didn't come back."

These images from relief organization World Vision International in Federal Way, Wash., were part of a minimovie shot in Southeast Asia within days of the December tsunami disaster there and sent as a video e-mail to a half-million subscribers and donors thanking them for their support.

Called the Asia Tsunami Video Update, the three-minute roundup of the organization's rescue and support operations in Sri Lanka, India and Thailand showed original footage of the waves, the victims and the aftermath of the disaster.

The day the tsunami hit, many of the 3,700 relief workers



already in the affected regions mobilized into teams to offer shelter, food and clothing. Some were already armed with video cameras and filmed for hours. One cameraman was sent from the organization's headquarters to help with the shooting.

According to Brad Cooper, World Vision's division director of Internet development, once the footage was transmitted electronically, video editors and

producers on the creative content team worked around the clock to select precisely the right clips that would communicate what the workers were doing. Working with New York-based e-mail vendor Bigfoot Interactive Inc. and Irvine, Calif.-based Vital-Stream Inc. for streaming video technology, the organization transmitted a series of messages to donors within three days of the disaster.

The clips were uploaded into servers, digitized and then transmitted, says Cooper. Using Macromedia Flash and Microsoft Windows Media formats, home users saw what relief workers had encountered.

Designed as a thank-you letter, the video was so effective that recipients continued to give donations online, says Cooper. To date, contributions to World Vision have topped \$250 million worldwide.

"The feedback we got from this was great," Cooper says. "Video reinforced what our people were doing in the field." According to Cooper, five times as many people viewed the video e-mail than the messages that had only text content.

"There was just no better way to understand the impact of the devastation than with video," says Cooper.

— Kathy Chin Leong

zipped off a follow-up video message thanking her for her business. "Customers can get the same information from other dealerships, but if you have a decent personality and can portray that in your e-mail, the customer will connect with you," he says.

EARLY ADOPTERS

Some executives deem video e-mail a timesaver compared with hunting and pecking at the keyboard. "I'm the slowest typist in the world," says Sheridan Square's Bianco. "My secretary used to type out my long e-mails, but now I create a video e-mail and communicating is so much faster."

But many of today's adopters say the technology proves its worth in attracting business while maintaining core relationships. Last fall, Authoria Inc., a Waltham, Mass.-based human resources software company, issued video e-mail created by Productorials Corp. in Boston to investors, analysts and reporters to announce that it was acquiring a key competitor.

Todd Chambers, Authoria's vice president of marketing, said the feedback was overwhelming. "It not only delivered the message in a unique way, it set a tone for our company," he says.

"We wanted to show how forward-thinking we are in both what we do and how we communicate to the outside world."

Chambers notes that after the release, bankers who were forwarded the video e-mail called to find out how they could invest in the company. "There is no question we will be doing more campaigns like this," he says.

Since video e-mail is a relatively new phenomenon, it is a strategic public-relations weapon that can generate buzz. When VIDISolutions partnered with the American Red Cross, America Online Inc. and Hewlett-Packard Co. to launch Project Video Connect in 2003, a free program that allows military families to send video e-mails to armed services personnel in the Middle East, more than 70 media outlets covered the news.

Sometime this year, video e-mail will be viewable on cell phones. According to VIDISolutions' Braun, a user of the company's VIDITalk technology will soon be able to transmit video e-mail to cell phones bundled with Windows Media Player. Likewise, companies transmitting messages with Destiny Media Technologies Inc.'s Clipstream technology will be able to send video

e-mail to Java-supported cell phones.

Soon users will be able to talk back to the sender of their video e-mails, according to Jarrod Erwin, vice president of strategic development at VoiceTech Communications Corp. in Houston. His company's voiceNow video e-mail service will be equipped with a new CRM feature: Recipients with a microphone-equipped PC will be able to automatically dial and talk back to the sender with a single mouse click.

What will it take for the video e-mail market to take off? There are still obstacles to overcome. No vendor's service is perfect. Video-streamed images don't always work over dial-up lines, and even businesses using DSL may find that video clips sputter.

But Braun asserts that the acceptance of broadband and the proliferation of Web cameras is setting the stage. "Companies will soon see that video mail will become just as important as text e-mail and voice mail," he says. "There will be room for all three."

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Leong is a freelance writer in Los Angeles. You can reach her at kchinleong@sbcglobal.net.

Fr: chained to your desk

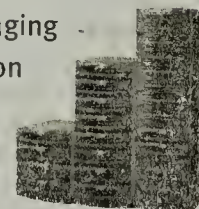
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BRIEFS

MetricStream Adds Sarb-Ox Support

■ MetricStream Inc. has extended functionality to its software compliance suite with support for Section 404 of the Sarbanes-Oxley Act. The new features are intended to help companies demonstrate the internal controls they have in place for financial reporting, according to the Redwood Shores, Calif.-based company. Among the key modules in the suite is MetricStream Monitor, a tool that provides visibility into ongoing compliance efforts through role-based dashboards and scorecards. The J2EE-based software can run on any version of Unix, Windows NT or Linux, and it supports Oracle databases. Pricing is based on the number of users and starts at \$200,000.

Metadot Offers Subscription Option

■ Metadot Corp. in Austin is now selling its open-source portal server on a subscription basis, with various levels of customer support and maintenance. The new Metadot Portal Server Business Edition lets users create and maintain extranets, intranets and corporate Web sites, as well as project and community portals, the company said. The application is browser-based and runs on Linux, Solaris, Windows and OS X. Pricing starts at \$2,000 per year.

NetSuite Releases NetFlex Tool Set

■ Hosted business applications provider NetSuite Inc. in San Mateo, Calif., last week announced that it is offering a new Web services-based technology platform called NetFlex. The product delivers a tool set that lets users customize or craft their own applications within the NetSuite framework and integrate those applications with other applications, the company said. NetFlex is available now at no extra charge to NetSuite users.

ROBERT L. MITCHELL

Drowning in Unstructured Data

THE YEAR WAS 1989. A rather disorganized co-worker of mine had begun running a personal information manager and Lotus Magellan, a newfangled "disk navigation system" that combined fast search with a

file viewer window. In his case, the programs didn't always help. His excitement at showing off how quickly he could find some arcane bit of information often faded into a plaintive, "Wait, uh, uh, it's in here somewhere..."

His plea became an inside joke around the office, a mantra to be recited around the coffee machine. The best approach, I thought, was to organize or add structure to documents as they came into the system. If you didn't spend time upfront to organize your data, what could you expect but chaos? Garbage in equals garbage out.

I'm not laughing anymore. Sixteen years later, the trickle of data on that original multimegabyte desktop hard drive has become a multigigabyte torrent, with much of that content linked to other documents on the company's LAN, Web site and e-mail server, and the World Wide Web. Today, there is simply too much information to parse; the orderly processes I used to conscientiously tag, arrange and otherwise transform incoming data simply take too long. I am drowning in a sea of unstructured information.

Ironically, Magellan turns out to have been the harbinger of today's desktop search tools, which have come to my rescue. Programs Copernic and X1 Desktop Search (the latter, a descendant of Magellan, is the one I prefer) combine a full-text index of documents, e-mail messages and other content with a file preview pane, enabling the user to almost instantly locate and display desired information. Support for docu-



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ment type filters and Boolean notation allows fine-grained searches. Further, users can usually act on the file within the context of the application that created it. For example, within X1, an e-mail message in the search results window can be forwarded by clicking a button.

Desktop search tools are creeping onto corporate desktops, both because many are free and because

the productivity benefits are potentially large for users with significant amounts of locally stored content. For IT organizations that want to support desktop search, however, the issues are a bit more complicated than simply adding a preferred desktop search engine to the standard system image.

For example, users can point desktop search tools at shared volumes on the network, including public folders, creating unexpected disk I/O and network traffic loads. Also, most products aren't smart enough to deal with shared storage when laptops are disconnected. Indexed content may be unindexed when users are on the road, only to be reindexed once again when the user returns.

Security policies also need to be set to determine who can index and view which files. And as a security vulnerability in Google's tool made clear last year [QuickLink 51557], the products are still evolving.

Ultimately, however, users don't need a desktop search tool. What they need — and what IT should deliver — is an integrated system that allows searches of local, enterprise and Web-based con-

tent from within a single, seamless user interface. Right now, that's still a tall order.

First-generation enterprise search tools from desktop search vendors include a second, network-based search engine that sits on the corporate LAN and indexes shared folders and intranet content. A user's ability to view or search selected content is governed by policies and permissions the administrator has set using LDAP or Active Directory.

Coveo Solutions Inc. offers an enterprise search complement to its Copernic desktop search tool. However, users still must use a different interface for each resource. X1 Technologies Inc. is readying a similar tool for release this spring that it says will include a unified user interface. X1, which has partnered with Yahoo to give away a consumer version of X1 Desktop Search, could be among the first to deliver access to the search trinity of desktop, enterprise and Web content from within a single graphical user interface.

Desktop search vendors are also moving quickly beyond e-mail to support content management software. Coveo is rolling out a version of its product for Microsoft's SharePoint; X1 has similar plans. Meanwhile, established enterprise search vendors such as Autonomy Corp. have launched their own products for the desktop market. If you use enterprise search already, your vendor is probably the first place to look for desktop search.

But do get started. Although the products aren't perfect, the productivity benefits of desktop search are too irresistible for users to ignore. If you don't start establishing a corporate IT standard for desktop search soon, you may find that your users have done it for you. **53169**

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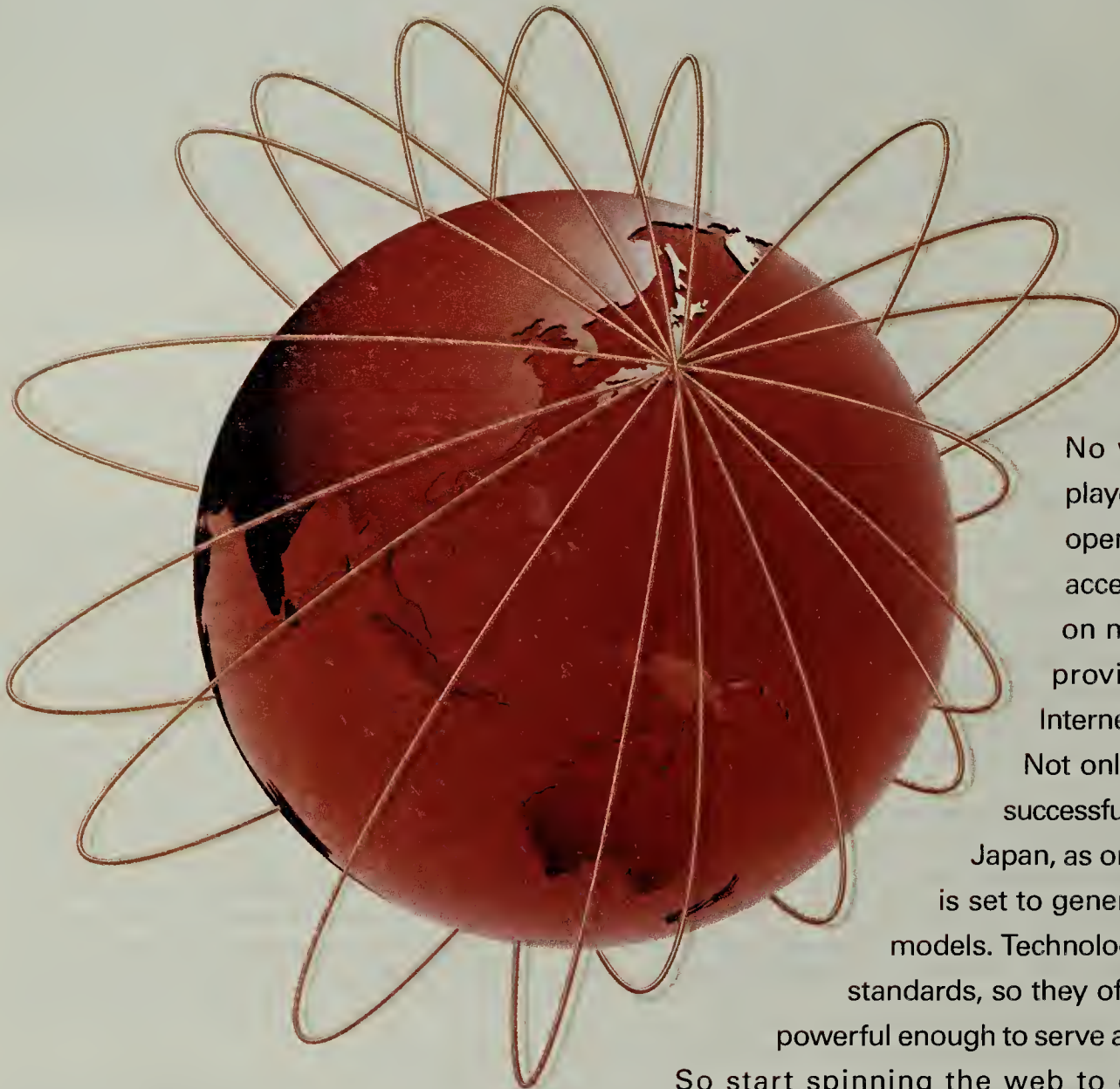
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How Japan helps Cisco Systems spin a stronger web.



No wonder Cisco Systems, the preeminent player paving the information superhighway, just opened an R&D center in Tokyo. With broadband access accelerating and traffic five times heavier on many ISP networks than that carried by U.S. providers, Japan is where the future of global Internet growth is already happening.

Not only has a government-led "e-Japan" initiative successfully incentivized rapid broadband deployment—Japan, as one of most sophisticated broadband markets, is set to generate many of the world's best new business models. Technologies perfected here satisfy the most rigorous standards, so they offer another huge payoff: they promise to be powerful enough to serve any other part of the planet.

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Here's a crash course for your business sponsor in what he needs to know about your IT project.

By Michael H. Hugos

IT MENTOR

Business executives who sponsor system development projects need a way to assess them as

they move through the define, design and build sequence. This checklist can be used to assess any IT development project, and it will reveal quite clearly whether things are going well.

GOODNESS OF SYSTEM DESIGN

In the first two to six weeks of the project — the define phase — ask yourself and the system builder in charge of the project the following questions:

What is the business goal of the project? In two sentences or less, state the action the company is going to take and the desired result of that action. This is the goal. It is the target, the destination the project is supposed to reach. Figure out what it is, or stop the project.

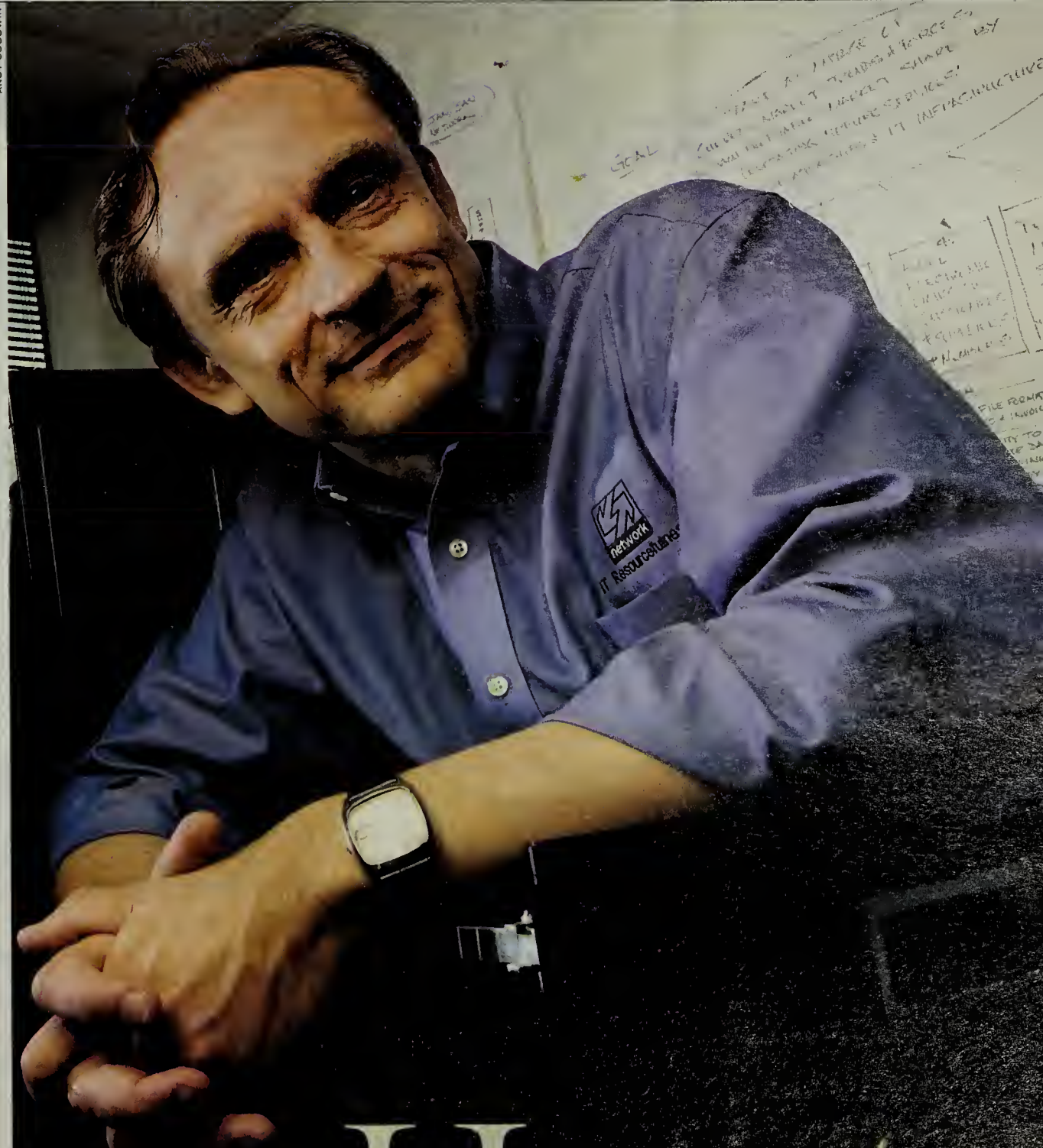
Which performance criteria is the system supposed to meet? State requirements the system will meet in four areas:

- 1 Business operations
- 2 Customer expectations
- 3 Financial performance
- 4 Company learning and improvement

These are the specific measures that will determine whether the system will be a success. Make sure that you and the people designing and building the system know what they are.

Do you believe that a system that meets the preceding performance requirements will accomplish the business goal you are striving for? If you have a feeling that important performance requirements have been left out, add them before the project gets any further along, but make sure that you add only requirements that are strictly necessary to accomplish the business goal. Requirements that are too broad will result in increased system complexity and less chance that the system can be successfully built.

ANDY GOODWIN



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TUESDAY, APRIL 12

Registration Open 11:00am - 8:30pm

9:00am - 9:30am	Breakfast
9:30am - 11:30am	Pre-Conference Tutorials and Primers
11:30am - 1:00pm	Luncheon
12:00pm - 5:00pm	Pre-Conference Golf Outing
1:00pm - 5:25pm	End-User Case Studies; SNIA Voice of the User Track; SNIA Technical Tutorials Track; Deployable Solutions Track
6:00pm - 8:00pm	Welcome Reception

WEDNESDAY, APRIL 13

Registration Open 7:00am - 8:00pm

7:15am - 8:15am	Breakfast
8:15am - 8:30am	Opening Remarks
8:30am - 9:15am	 Opening Visionary Presentation Ira Winkler, Security Expert and Author of <i>Spies Among Us</i>
9:15am - 9:45am	 End-User Case Study Bob Mathers, Second Vice President, Information Technology Operations & Disaster Recovery, Guardian Life Insurance
9:45am - 10:15am	 Industry Leader Presentation Ann Livermore, Executive Vice President, Technology Solutions Group, Hewlett-Packard Company
10:15am - 10:30am	Break
10:30am - 11:00am	 End-User Case Study Bob Eicholz, Vice President, EFILM, LLC
11:00am - 11:30am	 Industry Leader Presentation John Thompson, CEO, Symantec
11:30am - Noon	 End-User Case Study: The Story (and Storage!) Behind Kodak's Online Photo Success Sonja Erickson, Vice President, Technical Operations, Kodak EasyShare Gallery
Noon - 12:45pm	 Panel Discussion Moderated by: Jon William Toigo, CEO & Founder, Toigo Partners International
12:45pm - 2:00pm	Luncheon
2:10pm - 5:40pm	End-User Case Studies; SNIA Voice of the User Track; SNIA Technical Tutorials Track; Deployable Solutions Track
5:40pm - 8:40pm	Expo with Dinner and Interoperability & Solutions Demo • 30-plus SNIA member companies collaborating on integrated solutions • Opportunity to meet leading experts and engineers

THURSDAY, APRIL 14

Registration Open 7:00am - 6:00pm

- | | |
|-------------------|--|
| 7:15am - 8:15am | Breakfast |
| 8:15am - 8:30am | Opening Remarks |
| 8:30am - 9:15am | Opening End-User Visionary Presentation |
| 9:15am - 9:45am |  Industry Leader Presentation
Andy Monshaw, General Manager, Storage Systems,
IBM Systems and Technology Group |
| 9:45am - 10:15am |  End-User Case Study
Bob Logan, Vice President, Enterprise Infrastructure Services, SAIC |
| 10:15am - 10:30am | Break |
| 10:30am - 11:00am |  Industry Leader Presentation
Jeff Nick, Vice President and Corporate-Wide CTO, EMC Corporation |
| 11:00am - 11:30am |  End-User Case Study
Sasan Hamidi, CSO, Interval International |
| 11:30am - Noon |  Industry Leader Presentation
John Kelley, President and CEO, McData |
| Noon - 12:45pm |  End-User Panel
Moderated by: Steve Duplessie, Founder & Senior Analyst,
Enterprise Strategy Group |
| 12:45pm - 2:00pm | Expo with Lunch and Interoperability Demo |
| 2:10pm - 5:40pm |  IDC Storage Analyst Briefing |
| 2:10pm - 5:40pm | End-User Case Studies; SNIA Voice of the User Track;
SNIA Technical Tutorials Track; Deployable Solutions Track |
| 4:00pm - 7:00pm | Expo Open
• Cocktail Reception in Expo begins at 5:30pm |
| 7:00pm - 9:30pm | Gala Evening with Awards Ceremony, Dinner & Entertainment |

FRIDAY, APRIL 15

Registration Open 7:30am - 10:00am

- | | |
|------------------|--|
| 7:30am - 10:00am | Continental Breakfast |
| 8:30am - Noon | End-User Case Studies; SNIA Voice of the User Track;
SNIA Technical Tutorials Track; Deployable Solutions Track |
| Noon | Conference Concludes |

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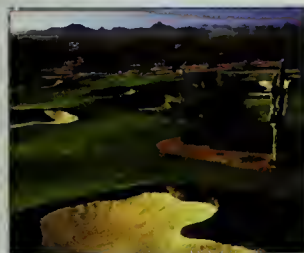


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- ☐ Aerospace
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Your Job Title/Function:

- IT MANAGEMENT**
- ☐ CIO, CTO, CSO
 - ☐ Executive VP, Senior VP
 - ☐ Vice President
 - ☐ Director
 - ☐ Manager/Other IT Manager
 - ☐ Supervisor
- BUSINESS MANAGEMENT**
- ☐ CEO, COO, Chairman, President
 - ☐ CFO, Controller, Treasurer
 - ☐ Executive VP, Senior VP, VP, General Manager
 - ☐ Director, Manager
 - ☐ Other Corporate/Business Manager

Number of employees in your entire organization (ALL locations)

- ☐ 20,000 or more
- ☐ 10,000 - 19,999
- ☐ 5,000 - 9,999
- ☐ 1,000 - 4,999
- ☐ 500 - 999
- ☐ 100 - 499
- ☐ 50 - 99
- ☐ Less than 50

What is your organization's annual IT/IS budget for all IT/IS products?

- ☐ \$1 Billion or more
- ☐ \$500 Million - \$999.9 Million
- ☐ \$100 Million - \$499.9 Million
- ☐ \$50 Million - \$99.9 Million
- ☐ \$10 Million - \$49.9 Million
- ☐ \$1 Million - \$9.9 Million
- ☐ \$500,000 - \$999,999
- ☐ \$250,000 - \$499,999
- ☐ \$100,000 - \$249,999
- ☐ Less than \$100,000

What is the estimated annual revenue of your entire organization?

- ☐ Over \$10 Billion
- ☐ \$1 Billion - \$9.9 Billion
- ☐ \$500 Million - \$999 Million
- ☐ \$100 Million - \$499 Million
- ☐ Less than \$100 Million

The one item that best describes your involvement in the IT purchase process

- ☐ Authorize/approve purchase
- ☐ Evaluate/recommend products, brands, vendors
- ☐ Specify features/technical requirements
- ☐ Set budget for expenditures
- ☐ Determine need to purchase
- ☐ Create IT strategy
- ☐ All of the above

Would you like to receive information about playing in the golf outing on Tuesday, April 12th?

- ☐ Yes
- ☐ No

Do you need hotel accommodations?

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- Please send cancellation requests via email to: snwreg@computerworld.com

Which existing computer systems in your company does the new system design leverage? The new system should leverage the strengths of systems and procedures already in place. That way it can focus on delivering new capabilities instead of just replacing something that already exists. If you decide to replace everything and build from a clean slate, you had better be prepared for the considerable extra time and expense involved and be sure that it's worth it.

Does the overall design for the new system break down into a set of self-contained subsystems that can each operate on its own and provide value?

Large computer systems are really made up of a bunch of smaller subsystems. Your company should be able to build each subsystem independently of the others. That way, if one subsystem runs into problems, work on the others can still proceed. As subsystems are completed, they should be put into production as soon as possible to begin paying back the expense of building them. If all subsystems must be complete before any can be put to use, that's a very risky, all-or-nothing system design. Change it.

How accurate is the cost-benefit analysis for the new system? Have the business benefits been overstated? Would the project still be worth doing if the business benefits were only half of those predicted? Cost-benefit calculations usually understate costs and overstate benefits. You are the one who is best able to judge the validity of the calculations. Do you believe they are accurate? The bigger and riskier the project, the greater the benefits must be to justify the risks and expense. Don't spend more on a system than it's worth.

How has the system builder demonstrated that his system design and project leadership skills are appropriate to the demands of the project? If you don't have a qualified system builder in charge,

Strategic Guidelines

- 1** Closely align projects with business goals.
- 2** Use the system to change the competitive landscape.
- 3** Leverage the strengths of existing systems.
- 4** Use the simplest combination of technology and business procedures to achieve as many objectives as possible.
- 5** Structure the design to provide flexibility in the development sequence used to create the system.
- 6** Don't try to build a system whose complexity exceeds the organization's capabilities.
- 7** Don't renew a project using the same organizational approach or system design after it has already failed.

Tactical Principles

- 1** Ensure the presence of a full-time leader (the system builder) with overall responsibility and the appropriate authority.
- 2** Define a set of measurable and non-overlapping objectives that are necessary and sufficient to accomplish the project goal.
- 3** Assign project objectives to teams of two to seven people with hands-on team leaders and the appropriate mix of business and technical skills.
- 4** Tell the teams what to do but not how to do it.
- 5** Break project work into tasks that are each a week or less in duration and produce something of value to the business every 30 to 90 days.
- 6** Ensure that the project office staff works with the system builder and team leaders to update plans and budgets.

the project will fail from lack of direction. Management by committee won't work. If this person lacks the necessary design and leadership skills, he must be replaced, no matter what other skills he may possess.

Which of the strategic guidelines have been followed, and which have not? If all seven of the strategic guidelines are followed (see box, below left), the design of the system is very good. It's acceptable if one of the guidelines — except the first one — isn't followed. If two aren't followed, there had better be very good reasons. In that case, determine which extra precautions will be taken to compensate for the increased risk. If more than two of the guidelines aren't followed, the design is fatally flawed. The system can't be built on time or on budget, if it can be built at all.

PROGRESS MADE DEVELOPING THE SYSTEM

As the project moves through the design and build phases, ask yourself, the system builder and the project teams the following questions:

Are the project plan and budget in place? Do people pay attention to the plan? Is there a project office group that provides regular and accurate updates to the plan and the budget? Multimillion-dollar system development projects involve a lot of people and stretch across some period of time. The project plan is the central coordinating instrument that tells every person exactly what he's supposed to be doing at any given time. If the plan isn't kept current, the people on the project have no way to effectively coordinate their work. The system builder will lose track of the details. Delays, cost overruns and confusion will result. People won't know how much has been spent to date or how much more is required to finish. When this happens, the project goes into a death spiral.

Are the subsystem teams organizing their work into clearly defined design and build phases?

Are these phases getting done on time and on budget? The project team working on each subsystem should spend one to three months creating a detailed design and system prototype (design phase). The detailed design should then be turned into a working system within two to six months (build phase). If things take longer than this, the project is moving too slowly and it will lose momentum and drift. It's the system builder's responsibility to keep things organized and moving. Make sure this person is capable.

How are the six tactical principals for running projects being applied (see box, left)? Do you believe the answers you hear? Can the system builder explain this clearly, using plain language, or does he resort to the use of jargon? A qualified person can give you straight answers. The system builder is, in effect, the general contractor running the job. He can make or break the project. Get a new one if you need to.

What's the situation this week? Spot-check the project plan and budget from time to time. Have the system builder review the current project plan with you, show you the money spent to date on each subsystem, and the estimate for remaining time and budget to complete each subsystem. Do you believe what you hear? Can the system builder explain the situation clearly, without tech talk? How does the most recent estimate of time and budget compare to original estimates? Is it still worth the cost to complete the project?

COMPETENCE AND CONFIDENCE OF PEOPLE ON THE PROJECT

Ask the following questions of yourself, the system builder and the project teams:

What are the design specifications? As each project team completes its design phase, ask them to show you the design specifications, the process flow diagrams, the logical data model for their subsystem, the user interface, the technical architecture diagrams and the system prototype. Can they tell you how this system will deliver the business benefits in the cost-benefit analysis? Do the design specifications make any sense? Do the people on the team know what they're talking about?

Are the project team members as confident as the project team leaders? Are the team leaders as confident as the system builder? If people believe they have the right skills and a good system design, they will be confident in their ability to build the system. If people at every level don't share and reflect this confidence, there's a problem somewhere. If people are trying to transfer onto the project, that demonstrates confidence. If people are transferring off the project or leaving the company, that indicates lack of confidence. Expect the project to fail. **52996**

Adapted with permission from *Building the Real-Time Enterprise: An Executive Briefing*, by Michael H. Hugos (John Wiley & Sons Inc., 2005).

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BARBARA GOMOLSKI

CIO Success: Nature or Nurture?

IBET YOU'VE HEARD THIS BEFORE: The CIO must "get a seat" at the executive table. Once there, he must convince others that IT is strategic to the organization, thereby securing his own destiny. There are a host of other mandates that go along with this advice, such as "develop a good relationship with business stakeholders."

Despite their best attempts, however, some CIOs are never elevated (figuratively or literally) from the basement of the organization. Why is that?

Recently, I had an interesting discussion with a number of seasoned IT managers. We were talking about some of the sage advice that is often given to CIOs, such as the above instructions. Eventually, the topic turned to what I thought was a good question: How much control does the typical CIO really have over his destiny?

I look at this as a sort of nature vs. nurture question. Nature vs. nurture has to do with how much of one's behavior and personality is predetermined by genetics and how much is shaped by environmental factors. Applied to the destiny of CIOs, nature vs. nurture is a way to look at how much of a CIO's success depends on his performance and how much is predetermined by the attitude, culture and strategy of the firm in which he works.

Advice to CIOs (including that given in my own column) almost always implies that the CIO is the master of his destiny. All he has to do is be a highly competent technologist, become a savvy business person and forge successful relationships with other busi-

ness executives. Then IT becomes strategic, and the CIO gallops off to success.

This would be a good scenario, but intuition and our own experiences tell us that this is not always the way it happens.

I have talked with many CIOs who have shared their frustration about some of the roadblocks they face in making IT strategic and in securing their own place in the organization. These road-

blocks often include the following:

- The CEO or CFO (or both) doesn't think IT is strategic and is unlikely to be persuaded that it is.
- IT has always been seen as "overhead" or a cost center in the company.
- The corporate executives don't really understand what IT does, nor do they wish to.

Some will say these are merely cop-outs — ways for a CIO to escape his own responsibility. Certainly, some CIOs use statements like these to excuse their failure.

But I think that some CIOs face real roadblocks that virtually nobody could overcome. For example, if the CEO is convinced that IT is merely a utility — or worse, a necessary evil — how likely is it that even a good CIO can convince him otherwise?

I suspect that the majority of CIOs and IT managers — even those facing some of the major challenges previously discussed — can still impact their destiny. But a smaller percentage (perhaps 20%) may work in organizations where the attitude toward IT makes it almost impossible for IT to ever be seen as strategic.

As an IT professional and potential or current CIO, you need to think about this when you look at career opportunities. If you want a seat at the executive table and want to oversee a strategic IT group, you'd better make sure that the CEO's attitude and the corporate culture support that ambition. Don't assume that you can change the CEO's mind.

Conversely, if you are content to be the keeper of infrastructure and head of an IT utility, find an organization where that vision matches the top executive's idea of "great IT."

Most of you do have some control over your destiny. You must continue to provide reliable and low-cost infrastructure services while developing strong relationships with business leaders. You must help the business to understand how it can use IT to accomplish its goals. You must determine the staffing mix that will help you do all this.

But for those in the minority, who have little or no control over your destiny, there's not a whole lot you can do except understand the situation you face. And you might want to look for another job. ☎ 52995

STACKED DECK?

Many organizations unwittingly set up the CIO to fail. Take this CIO success quiz to gauge your chances:

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BARBARA GOMOLSKI, a former *Computerworld* reporter, is a vice president at Gartner Inc., where she focuses on IT financial management. Contact her at barbgomolski@yahoo.com.

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A Good Offense

Tired of being under attack, IT executives like Eric Litt, chief information security officer at GM, are taking preventive steps to head off security breaches. **Page 36**



Supersmart Security

Fresh from the lab, these intelligent security systems are designed to recognize new threats and limit damage. **Page 46**

OPINION Secure the People

Most companies are overlooking their biggest security hole — their own people, says columnist Mark Hall. **Page 50**

**SPECIAL
REPORT**

How to build a security organization and select tools that can foil internal and external attacks.

PROACTIVE Security

ASK AN IT EXECUTIVE whether he'd prefer a proactive security stance over a reactive one, and of course the answer would be yes. For one thing, it just sounds better. Plus, it's not much fun being reactive, because it means cleaning up messes like thousands of virus-infected PCs and explaining the nightmare to the boss.

So this special report is dedicated to the notion that it's better to be proactive — a concept that seems obvious but is very new in the IT security field. You'll learn how to buy intrusion-prevention systems, build a proactive security organization and bake security into the application development process at the outset.

But no security organization can

EDITOR'S NOTE possibly be 100% proactive.

“That would mean that you predict every possible threat and risk to your organization. The fact is that you will be surprised and caught off-guard from time to time,” says Doug Landoll, CEO of IT security consultancy Veridyn. In other words, sometimes you'll

have no choice but to be reactive, though ideally you will be able to quickly identify and respond to those crises, he says.

So what we're really saying is that it's time to blend some proactive techniques into your security mix, which is what forward-thinking companies like General Motors and AT&T are doing. “You just cannot sit back any longer and wait for

your LAN to go down,” says Ed Amoroso, chief information security officer at AT&T. “You need to be looking at things before they become a problem.” **Q 52874**

Mitch Betts is executive editor of Computerworld. He can be reached at mitch_betts@computerworld.com.

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"We are in a competitive stalemate with the creators of malware. What we are trying to do is gain back the advantage," says **ERIC LITT**, CISO at General Motors.

Tired of being under attack, companies are taking preventive steps to head off security breaches. **By Jaikumar Vijayan**

A Good Offense

ERIC LITT, CHIEF information security officer at General Motors Corp., calls it "management by inclusion." Simply put, it's an information security strategy that reduces operational risk by denying network access and services to all people and processes not previously vetted by the company. "If I don't know you're good, I don't talk to you," Litt says.

Litt is one of a growing number of security managers who say traditional reactive defenses — focused on blocking known threats at the edge of the network perimeter — are no longer enough. What's needed are more-proactive security capabilities that emphasize quicker identification and resolution of both internal and external threats.

"You just cannot sit back any longer and wait for your LAN to go down or for your employees to complain," says Ed Amoroso, CISO at AT&T Corp. "You need to be looking at things before they become a problem."

Several factors are driving this trend toward more-strategic security operations. Laws such as the Sarbanes-Oxley Act have put a greater burden on companies to demonstrate due diligence on matters related to information security. Worms, viruses, spyware and other types of malicious code are getting a lot better at sneaking past firewalls, antivirus defenses and intrusion-detection mechanisms. And growing wireless use, remote workers and the trend toward Web services are giving hackers more avenues for launching attacks.

Another important fact: The time it takes for hackers to exploit software holes has been shrinking dramatically, giving users very little time to react to new threats. The SQL Slammer worm of 2003 took eight months to appear after the flaw it exploited was first publicized. In contrast, last year's MyDoom worm started making the rounds in less than four weeks.

"It's getting so nasty out there, it's frightening," Amoroso says.

To achieve its goal of more-proactive security, GM launched a sweeping

overhaul of its processes, including the manner in which it authenticates users and systems, enforces security policies, controls access to network services, patches holes, spots intruders and responds to incidents.

It's a mighty task for a \$186 billion behemoth with global operations, thousands of partners and tens of thousands of users. But it's essential in order for GM to stay one step ahead of the bad guys, Litt says.

"We are in a competitive stalemate with the creators of malware," Litt says. "What we are trying to do is gain back the advantage."

Lane Timmons, security systems analyst at Texas Tech University's medical school in Lubbock, says a key to this is a better understanding of how your company's networks behave normally so you can spot abnormal activity more quickly.

After getting hammered by worms and viruses over the past few years, the school deployed several tools to help it spot and squelch attacks more quickly than the "hundreds of man-years of effort" that it used to take, Timmons says.

Among those tools is the network behavior modeling product QRadar from Q1 Labs Inc. in Waltham, Mass. The software analyzes and models typical network activity over a set period of time and then uses that data as a baseline to identify abnormal activity that might suggest the presence of worms, Trojans, port scans or denial-of-service attacks.

Such behavior modeling has dramatically improved the university's ability to detect and respond to both internal and external intrusions, Timmons says. "Our ability to do a real-time analysis of our networks has made a big difference," he says.

Actionable Data

Integrating and correlating information from multiple security technologies is also crucial to enabling a more holistic view of the threats and vulnerabilities facing a corporate network, says Amoroso.

To this end, AT&T is retiring all of its individual Internet-facing firewalls, intrusion-detection systems and anti-virus tools and is integrating the functions into its IP backbone layer. The company has built a massive security event management system, called Aurora, that's capable of pulling in and correlating terabytes of network traffic and security data from the IP layer.

The data analysis allows AT&T to
Continued on page 38

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Continued from page 36

spot trends and signs of impending trouble far better than the fragmented view provided by the individual security technologies, Amoroso says.

"It gives us real actionable data, to respond to threats" before they materialize into full-fledged problems, he says.

Prep Work

Being proactive also means ensuring that security is built into your application software and not bolted on later, says Mary Ann Davidson, CISO at Oracle Corp.

Customers should ask vendors questions about their security practices, Davidson says. Questions should include, "How do you write secure code? Do you train your developers for that? Do you do ethical hacking to test your code? How are you making it easier for your customers to secure your code? What is the best practice for locking down your product?" she says.

What's crucial at GM, says Litt, is "making sure the code we get is really secure out of the box and that the vendors are not making us a testbed for their software." That's because a majority of the security problems companies are facing today are

the direct result of software bugs that hackers are exploiting. Litt is working with several influential industry and user groups to pressure vendors to pay more attention to security.

"We are trying to use our combined voices to drive the software industry to think about security in a different way," says Litt, who for years has been including strict security terms and conditions in all of GM's software purchasing contracts.

GM is also applying the same concept to the software it develops in-house. The company has instituted "toll gates" for reviewing security at various stages in the product development life cycle "even before the first line of code is written," Litt says.

In the end, however, there's a limit to just how proactive you can be, says Lloyd Hession, CISO at Radianz Inc., a New York-based provider of telecommunications services to financial companies.

"One of the key issues is that we can't really figure out what the next threat scenario is going to be," he says. "A year ago, for example, nobody was up and jumping over spyware. It's kind of suboptimal to want corporate commitment and resources to be deployed today if you

SNIFF OUT TROUBLE

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Time Is of the Essence

Advance warning can be useful in preparing and prioritizing defenses, says Lloyd Hession, CISO at New York-based telecommunications provider Radianz. Last May, for example, his company received advance information on a critical protocol vulnerability in its voice-over-IP networks that received little of the broad attention that worms and viruses do but was vital to fix nonetheless, Hession says.

Radianz was notified of the vulnerability by its security intelligence service from Symantec Corp., which it uses to monitor impending threats to its security. Symantec's DeepSight threat management system collects data from firewall and intrusion-detection systems from about 20,000 sensors placed on customer networks around the world and looks for pat-

terns suggesting worm or virus attacks.

Ensuring that all internal and external systems attempting access to a corporate network have the proper security configurations can prevent otherwise secure networks from being compromised by rogue machines. So, too, can timely patching, says Tim Powers, senior network administrator at Southwire Co., a Carrollton, Ga.-based maker of electrical wires and cables.

"This is a game where we used to have a few weeks to prepare. Now, days matter," says Powers, who is using an automated patch management tool from South Jordan, Utah-based LANDesk Software Inc. to test and deploy patches across his network. "It's about doing it better and faster and just lowering the time between getting patches and getting updated."

—Jaikumar Vijayan

don't know what it is being deployed to really stop."

Instead, the goal should be to better prepare yourself for attacks, Hession says. And that means being able to identify threats early, have a good incident-response and backup process in place and ensure that there is no "skills mismatch" between your security team

and the attackers when the attacks do come, he says.

"There is no silver-bullet technology or singular process change" for addressing this problem, Litt says. The goal should be to "social-engineer security into your processes versus putting it in as an afterthought," he says. **52584**

WEAPONS IN THE ARMORY

Technology vendors are pitching a variety of tools and approaches to help companies better prepare for attacks. Among them are the following:

INTRUSION-PREVENTION SYSTEMS

These products, evolved from network intrusion-detection systems, help companies block both known and unknown attacks. Most products in this class work by looking for known virus signatures and anomalous network behavior that might indicate the presence of a worm or virus. See "Erecting Barriers" on page 42 for more on intrusion-prevention systems.

■ **UnityOne IPS**, TippingPoint Technologies Inc., Austin (a division of 3Com Corp.)

WHAT IT DOES: In addition to identifying and blocking threats, the tool supports traffic classification and rate-shaping functions for high-priority applications.

■ **Attack Mitigator IPS 5500**,

Top Layer Networks Inc., Westboro, Mass.

WHAT IT DOES: The ASIC-based hardware appliance is designed to deal with content-based attacks, such as worms and Trojan horses, as well

as rate-based attacks, such as distributed denial-of-service attacks.

■ **Juniper IDP**, Juniper Networks Inc., Sunnyvale, Calif.

WHAT IT DOES: It's a rules-based intrusion-detection and -prevention tool.

■ **Proventia**, Internet Security Systems Inc., Atlanta

WHAT IT DOES: This appliance has more than 225 built-in rules for detecting and blocking hybrid threats.

ENDPOINT SECURITY PRODUCTS

These ensure that endpoint devices, such as PCs, notebooks and handhelds, have appropriate protections in place, including active firewalls and updated antivirus software and patches, before letting the devices access a corporate network.

■ **Cisco Security Agent**, Cisco Systems Inc.

WHAT IT DOES: This software combines host intrusion-prevention functions with spyware/adware protection and host firewall and operating system integrity assurance.

■ **Check Point Integrity**, Zone Labs LLC, San Francisco (a unit of Check Point Software Technologies Ltd.)

WHAT IT DOES: It combines PC firewall technology with central policy management and policy-based enforcement on endpoint devices.

■ **Secure Enterprise**, Sygate Inc., Fremont, Calif.

WHAT IT DOES: It combines endpoint agent technology with policy management servers, LAN-based enforcement servers and remediation capabilities.

■ **CyberGatekeeper**, InfoExpress Inc., Mountain View, Calif.

WHAT IT DOES: This product suite combines functions for monitoring and enforcing security policies on local and remotely connected systems.

SECURITY INCIDENT/EVENT MANAGEMENT TECHNOLOGIES

This class of products is used by companies to gather, consolidate and analyze information from multiple-point technologies such as firewalls,

antivirus products and intrusion-detection systems. The goal is to enable better identification and response to key security incidents. **For more on this topic, go to: QuickLink 52131.**

■ **Security Manager**, NetIQ Corp., San Jose

WHAT IT DOES: It consolidates data from across the enterprise network and combines event correlation, visualization, trending and forensics to help companies get a more holistic picture of their security.

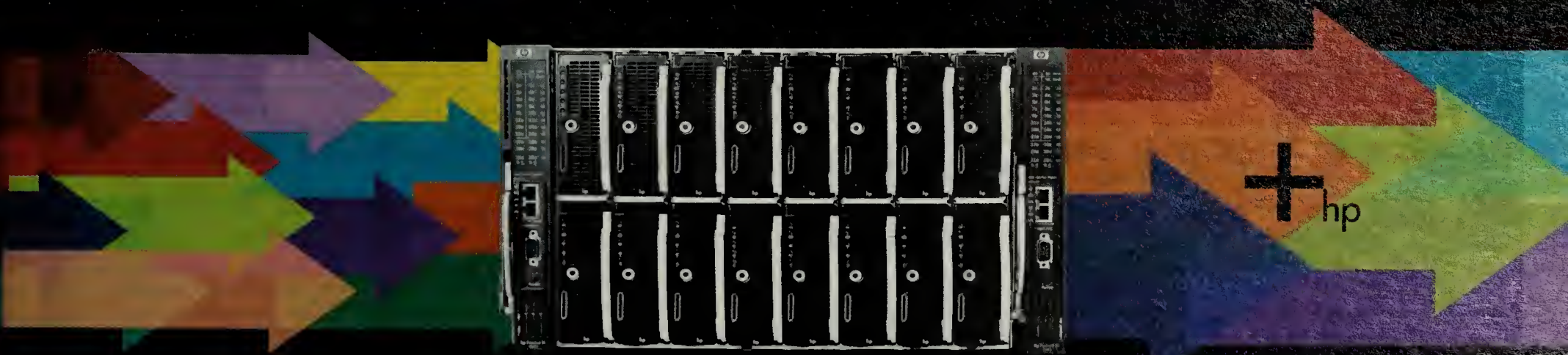
■ **Enterprise Security Manager**, ArcSight Inc., Cupertino, Calif.

WHAT IT DOES: It correlates events and information from multiple devices, including asset value and vulnerability data. It also supports automated investigation and resolution of problems.

■ **nFX Open Security Platform**,

NetForensics Inc., Edison, N.J.

WHAT IT DOES: It supports event normalization, threat visualization, reporting and analytics, policy compliance monitoring and incident resolution management.



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Baked-In Security

Catch flaws at the application development stage to avoid costly breaches. **By Heather Havenstein**



the burden falls on application developers to make sure it's not their application that is the entry point for a breach."

Yet few organizations have standardized efforts to address security inside the perimeter, says Ron Exler, director of research operations at Robert Frances Group Inc. in Westport, Conn.

Finding a Fix

According to research firm Gartner Inc., although many companies have made significant investments in tools to secure production applications, fixing security flaws

prior to production can generate significant cost savings. If 50% of vulnerabilities were removed before production of purchased and internally developed software, enterprise configuration management costs and incident-response costs could be reduced by 75% each, Gartner says.

To do it right, companies need to write a business application profile and a user application profile as part of the development process, says Exler. A business application profile details what an application does and its various components. A user application profile lays out the likely users of the application and how they will be using it.

"Security definitely ties into both the application and the users," Exler says. "As you are devel-

oping, you need to be cognizant of how the application is going to be used and the flow of it."

After the profiles are completed, IT security people can be brought in to analyze the security scenarios of these profiles. "You can see the potential weaknesses in the application, in the user workflow, and then you can see where you can build protections," Exler says.

The testing and quality assurance phases also should include a focus on security. An application that doesn't meet security requirements should be considered defective, just like an application that has errors or bugs that result in performance problems, says Exler.

But even more important is to change the "code and go" mind-set of developers. "If security needs to be raised in importance in the application development process, it should be part of the developer's performance plan, just like showing up on time or writing code with fewer errors," Exler explains.

Finally, companies should also be scrutinizing the security practices of their IT vendors. Exler suggests that companies add compliance with security requirements as part of service-level agreements.

Rigorous Review

Blue Cross and Blue Shield of Massachusetts Inc. has already ramped up efforts to infuse the company's application life cycle with preemptive security efforts.

Beginning with the technical design and review phase for new applications, the company evaluates for security risks and builds steps into the design and documentation that are aimed at eliminating potential holes, says Frank Enfanto, vice president of operations delivery and information security at the Boston-based health care organization. For example, it might use domain modeling or add permission- or role-based access to secure code, he says.

"We try to ensure we are consistent from project to project. That gives us a certain level of guidelines for developers to use," Enfanto says. "We also provide [developers] with certain coding standards that help mitigate general security risks."

Blue Cross conducts negative application testing to try to find security flaws that could allow unauthorized access to an application once it's deployed. The organization also scans its applications with intrusion-

Test It Or Toss It

AT PENTAIR INC., a Golden Valley, Minn.-based water treatment and storage product company, vendors are required to submit their Web application or hosting products to be scanned for security vulnerabilities by SPI Dynamics Inc.'s WebInspect tool.

"If they don't allow us to run the tool and find the vulnerabilities, I am not interested in allowing them to host my data," says Paul Samadani, Pentair's director of corporate IT. "We've been able to eliminate products or tell them they have to go back and fix a product that had issues."

The tool was designed to identify vulnerabilities within the Web application level at all phases of the application life cycle, including development, quality assurance, production and auditing.

For internal development, Pentair uses WebInspect to check any changes to code or new code developed for Web applications. In addition, the company has customized the product to ensure compliance with internal security policies.

The cost-benefit analysis for these tools is similar to that for buying perimeter tools, according to companies that have made the leap to building security protection into their applications.

"You can recover the cost of the technology on one mistake that you find," Samadani says. "Within seconds, someone will find that vulnerability, and you won't even know about it until the information is gone. The cost if all your intellectual property leaks out is tremendous."

— Heather Havenstein

detection technology to identify potential security holes in the code, but those types of tools are immature and return a lot of false positives, according to Enfanto.

"Our approach is not to just tell the coders to do this and test it and assume we are OK," Enfanto says. "Whatever you are doing in development and design, you are doing it in a pristine and clean environment. It is not the real world until it is deployed."

52583

MAKE VENDORS PAY

Opinion: Want more-secure applications? Then make software vendors liable for the holes in their products, says Bruce Schneier, CTO at Counterpane Internet Security:

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Intrusion-prevention systems don't just tell you there may be an attack — they block it. **By Drew Robb**



ANDREW SKWISH

Erecting Barriers

HERE ARE TWO APPROACHES to fighting viruses: prevention or cure. With networks, you can use an intrusion-detection system (IDS) to tell you when there is a problem or an intrusion-prevention system (IPS) to block it in the first place.

The Weather Channel Interactive Inc. in Atlanta, for example, picked up suspicious activity via an IDS. For several days in a row, it detected a high amount of traffic coming in for a specific server port from 1 a.m. to 3 a.m. "My concern was that if it was a probing attack and they were doing it off shift, I had to watch out for when they did a real attack during prime shift," says Dan Agronow, vice president of technology.

This kind of after-the-fact probing is like using a thermometer to confirm that you are indeed running a fever — much too late to prevent infection. The Weather Channel wanted to be able to react quicker

Continued on page 44

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Continued from page 42

and keep up with the latest attack patterns happening on the Internet. It installed UnityOne 1200 intrusion-protection appliances from TippingPoint Technologies Inc. in Austin. "Now when we get attacked, we have the forensic information we need and the ability to block it," says Agronow.

Block and Tackle

Intrusion protection is one aspect of a complete defense-in-depth strategy. It supplements but doesn't replace other layers already in place.

"Don't think that these products are something that will eliminate the need for spam filters, personal firewalls or whatever else you are using," says Brian Philips, director of security at Network Systems Technology Inc. in Naperville, Ill., which provides managed networking, storage and security services. "IPS is part of a defense-in-depth strategy, not a replacement for what you already have."

IPSs address some of the shortcomings that became apparent as companies deployed IDSs. While the latter tell you there may be an attack, the former seek to block it. In that sense, an IPS is similar to a firewall, but it takes the opposite approach.

"Firewalls and network IPS, though they appear to be very close to each other, are complementary but very distinct products," says Greg Young, an analyst at Gartner Inc. "Firewalls block everything except what you explicitly allow through; an IPS lets everything through except what it is told to block."

The biggest concern with setting up an IPS is the problem of false positives: mislabeling legitimate traffic as malicious. Unlike an IDS, which sits off to the side and alerts only when it detects a potential problem, an IPS sits in-line and actively blocks traffic. Although vendors have gotten better with their identification algorithms, they are far from perfect.

"False positives are still a huge problem, so much so that it severely affects the value proposition of an IDS or IPS," says Paul Stamp, an analyst at Forrester Research Inc. "Users are still really fearful that their IPS will end up effectively performing a denial-of-service attack on their infrastructure."

To get around this, most devices are designed for a three-phase deployment. Philips describes the steps

State of the Market

Broadly speaking, there are two types of IPS: **NETWORK-BASED AND HOST-BASED**. A network IPS is a device that performs a deep inspection of packets as they come through, even reassembling them to examine the entire communication before passing them along.

There are three types of vendors in this area:

1. **Pure-play IPS vendors**, such as TippingPoint.

2. **IDS companies**, such as Internet Security Systems Inc., which are expanding their functionality to include blocking.

3. **Firewall makers**, such as Check Point Software Technologies and NetScreen Technologies, which are adding deep packet-inspection functions to create "next-generation" firewalls.

In addition, IPS functions are being added to other network devices. For example, Juniper Networks Inc. acquired NetScreen last year, and 3Com Corp. purchased TippingPoint, so you can expect to see the added security technologies incorporated into the parent firms' networking gear to block suspect traffic.

A host-based IPS, on the other hand, is software rather than an appliance and comes from different vendors. Gartner analyst Greg Young says host-based intrusion prevention for servers is a mature technology, but he advises companies to hold off for now on deploying it on the desktop.

—Drew Robb

he took to set up a Sensitivist 500 IPS from NFR Security Inc. in Rockville, Md., for the Multiple Listing Service that Florida real estate agents use to share property information. It took 10 minutes to install the equipment and load some IP addresses for reporting. The box then operated in bypass mode, which means it didn't block anything.

"We started by having it stop nothing, tag everything and then start turning stuff on," he says.

Tuning took place over the next eight hours. Dur-

ing the second phase, the IPS still didn't block anything, but it generated reports of what it would have blocked. Philips then reviewed this data and decided whether he wanted the IPS to block that type of traffic. The third step was to activate the IPS, using the rules Philips had established. He then scheduled two other follow-up sessions to further tune the blocking.

Young suggests, however, that one way to avoid false positives is to avoid tightening down rules too much. Although this means that some malicious traffic will get through, this approach still has value. "There is incredible value to be gained just from blocking the clearly bad stuff," he says. "Then they can learn more about the gray areas and decide what else they want to stop."

A Step Beyond

Improved security isn't the only benefit from installing an IPS. Matt Merritt, vice president of operations at Beal Service Corp. in Plano, Texas, which provides administrative support to other units of Beal Financial Corp., installed TippingPoint UnityOne 2400 units as part of complying with regulatory requirements governing protection of customer information. But he also found that it cut down the load on the rest of the network. "The overall performance on our network has generally improved, due in part to TippingPoint's traffic normalization feature, which filters out bad or malformed packets," he says.

The University of Georgia's chief information security officer, Stan Gatewood, reports that putting in an IPS allowed him to see what was on the network and gain better control. "When we took a look at the network, we were shocked at the protocols that were running around out there," he says. "We can now narrow it down to the standards and protocols we will support and block the rest."

However, although these added benefits have value, the primary advantage is still the ability to block threats at the gateway, so the other layers don't need to deal with them.

"There's no reason to let Blaster into the network," says Gartner's Young. ☎ 52264

Robb is a Computerworld contributing writer in Los Angeles. Contact him at drewrobb@sbcglobal.net.

Five Tips for Selecting an IPS

STAN GATEWOOD, chief information security officer at the University of Georgia in Athens, uses IPSs both at the Internet gateway and at several points in his own network. He uses appliances at the gateway scaled to process the more than 2Gbit/sec. that pass through that point.

Gatewood won't disclose which model the university is using for edge protection, other than to say that it comes from either McAfee Inc., TippingPoint or Symantec Corp. — the three vendors whose products could process that much traffic. Internally, however, Gatewood needs only 100MB of capacity, so he uses several instances of Sleuth9 software from DeepNines Inc. in

Dallas on a Sun Microsystems Solaris platform.

Gatewood offers the following five criteria he used to decide which systems to install:

1 **PERFORMANCE**. Since an IPS runs in-line, it must be able to analyze all the packets passing through it without overloading. "We needed to make sure that it would stand up to our bandwidth and not disrupt network operations," he says. "You will find that a lot of vendors will fall off once you start talking about traffic in the gigabit range."

2 **BLOCKING ALGORITHMS**. The systems need to use multiple algorithms — signatures, behavior and policies — to block malicious actions.

3 **ANALYTICS**. It must have some intelligence built in to tell the difference between a normal event and an attack.

4 **REPORTING**. "We must be able to quantify the usage of the IPS and generate both technical and executive reports to show it is indeed working for us," says Gatewood.

5 **INTERFACE**. It needs to have a graphical user interface and a low learning curve for the IPS administrator. "We absolutely need it to be as intuitive as possible so we can have it up and running and effective as soon as possible," he says.

Gartner analyst Greg Young agrees that performance is the No. 1 criterion when selecting an IPS, but he cautions against making a decision based on a vendor's figures. Instead, a company needs to test in-house to see how it performs against its actual network traffic.

"We see customers getting very different results in terms of latency, throughput and overall IPS function," he says.

—Drew Robb

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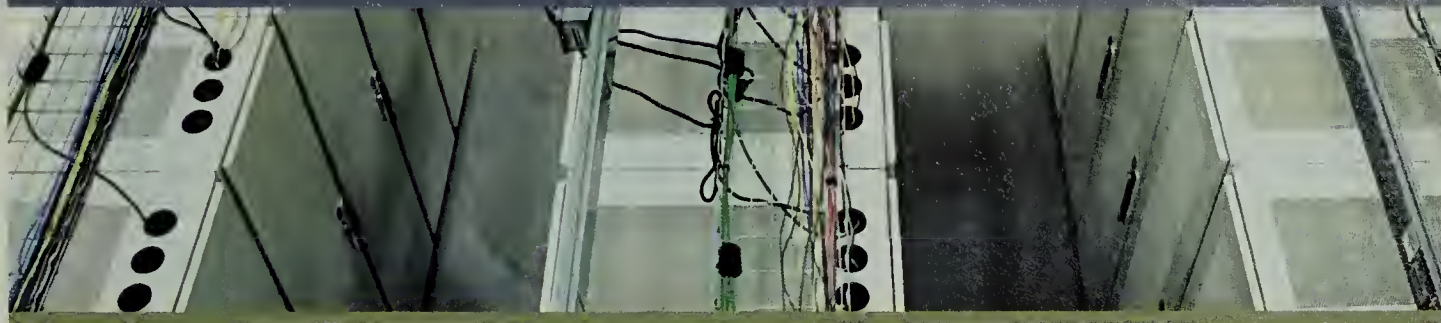
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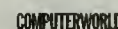
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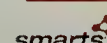
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FOR SOME TIME, we have been losing the battle against those who would damage our computer systems. That's because computers are increasingly interconnected and the software they run is more complex. Both factors increase vulnerability to infection and intrusion.

Security measures haven't kept up because they have tended to focus on prevention — antivirus software and firewalls are all geared toward blocking damage, not repairing it. And they are not all that good at detection because they are generally programmed to recognize known threats, not new ones.

"We've been riding the coattails of 1970s ideas, and the weaknesses are obvious to everybody," says David Patterson, president of the Association for Computing Machinery. "Security problems are glaring."

But experimental prototypes and a few commercial products are beginning to overcome the limitations of these 1970s ideas. Some of them can detect malware and intrusions without relying on hard-coded definitions or known behavior patterns. Others assume that bad things will happen regardless and instead attempt to limit damage and keep systems running.

Detection and Prevention

Sana Security Inc. in San Mateo, Calif., sells **intrusion-prevention software** patterned after biological immune systems. Its Primary Response product uses software agents to build a profile of an application's normal behavior based on the code paths of a running program. It then watches execution of the program for deviations from the norm. It requires no predetermined signatures or policy rules.

The software stops anomalous behavior by blocking system call executions. Because the software continually learns, Sana says, it can recognize and allow legitimate code changes. That enables it to minimize false positives, which can be a major drawback of these kinds of security tools.

Sana's technology has its roots at the University of New Mexico, where researchers have developed something of a specialty in "resilient and adaptive computing." For example, they are working on **Randomized Instruction Set Emulation**, or RISE, which is based on the notion that diversity in code is a good thing. The same is true in biology: Resistance to disease is greater in wild plants, where there is much genetic diversity, than in cultivated ones, where there is much more homogeneity.

Supersmart Security

Fresh from the lab, these intelligent security systems are designed to recognize new threats and limit damage. **By Gary H. Anthes**



RISE makes each system unique by randomly varying some code so that for an attack to spread, it would have to be modified for each computer. Some machine code is "randomized" at the time a process is initiated and then "de-randomized" when it is fetched for execution. In the meantime, malicious code would find the target code unrecognizable.

But IT managers don't have to wait for RISE to be commercialized to get some benefits of diversity, says Patterson, who is also a computer science professor at the University of Califor-

nia, Berkeley. "More than one computer company makes computers, and more than one company makes operating systems," he says. "Cost of ownership is less when everything is identical, but your vulnerability to attack is greater."

Recovery Room

Computer security experts have come to recognize that no affordable combination of protections can keep a system completely safe all the time. So they are focusing on how to make attacks less damaging while keeping systems running, albeit sometimes at

reduced levels of performance.

Patterson and others at Berkeley are working on **recovery-oriented computing** (ROC), in which systems do fast, almost invisible "microreboots" of the code experiencing some difficulty — a buffer overflow, for example — while an application is running. The key to ROC is logic that watches running processes, senses when something is wrong and then triggers the microreboot before the whole system crashes.

Patterson says there is a natural fit between tools for better detection and prevention, such as Sana's Primary Response, and tools for surviving an attack, such as ROC. "ROC is trying to make recovery fast and inexpensive," he says. "If recovery is expensive and complicated, then your detection mechanism needs to be close to perfect."

Patterson says his research team had an "Aha!" moment while developing ROC. "It was that lowering the cost of recovery makes it tolerable to have a higher false-positive rate."

Another way to keep business flowing is to simply slow an attack so that fewer machines are infected before countermeasures can be employed. As part of its work in resilient infrastructures, Hewlett-Packard Co. has developed **virus-throttling software** that permits connections from one machine to another at a slow rate — the way users work, say, at one or fewer connections per second — but delays or blocks connections to machines when the requests come at a rate of hundreds per second, as they do with modern worms.

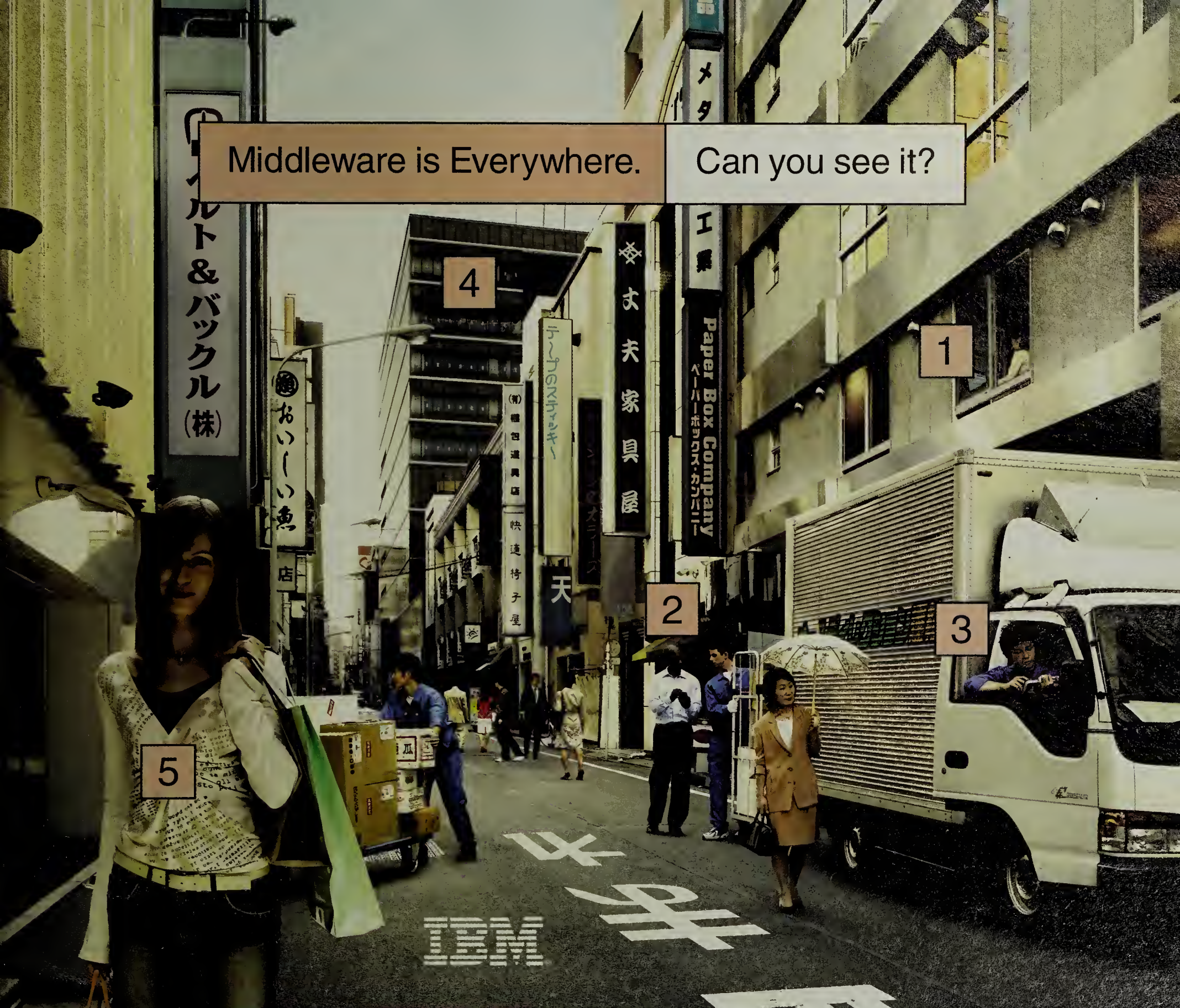
The **Responsive Input/Output Throttling** project at the University of New Mexico is combining different defense mechanisms, an approach that mimics biological defense mechanisms. It uses throttling to limit the rate of connection to other computers. But throttling is made much more flexible by coupling it with agents that learn the normal behaviors of specific combinations of users, machines and applications. "You turn it on and it learns what the rates are for your network behavior," says Matthew Williamson, senior researcher at Sana and previously a developer of throttling technology at HP Labs.

"Throttling opened the door to thinking about rates of things instead of, 'Is it allowed or not?'" Williamson says. "People in security tend to think in a binary way." But security, and its cost, are not either/or issues, he says.

"Costs can be significantly reduced by having systems that are resilient, and they don't have to work perfectly," he says. "You get quite a lot of value out of 80% security." **52263**

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SNAPSHOTS

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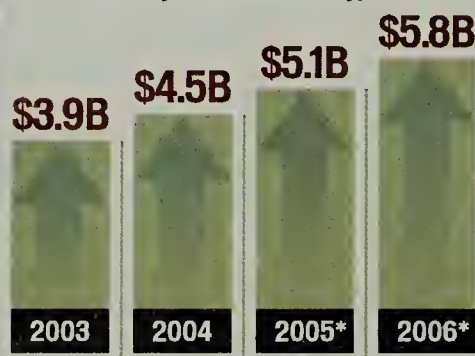
The biggest vendors of IT security software worldwide, by 2004 revenue:

- 1 Symantec Corp.
- 2 McAfee Inc.
- 3 Computer Associates International Inc.
- 4 Check Point Software Technologies Ltd.
- 5 Trend Micro Inc.

SOURCE: IDC, FRAMINGHAM, MASS., DECEMBER 2004

Security Software

Worldwide new-license revenue for security software of all types:



* Figures for 2005 and 2006 are projected

SOURCE: GARTNER INC., STAMFORD, CONN., FEBRUARY 2005

Top Barriers to IT Security

- 1 Limited budget
- 2 Limited staff dedicated to security
- 3 Limited or no time to focus on security
- 4 Limited or no security training/awareness
- 5 Complex technology infrastructure
- 6 Limited support from executives

Base: 8,000 senior IT executives in 62 countries

SOURCES: PRICEWATERHOUSECOOPERS, NEW YORK, AND CIO MAGAZINE, FRAMINGHAM, MASS., SEPTEMBER 2004

MARK HALL

Secure the People

When you and your company's chief security officer sit down to plot the budget for protecting the corporate WANs and LANs, servers and desktops, laptops and other mobile devices, there's a lot to discuss. Should you invest in better firewalls or intrusion-prevention systems? Additional anti-virus technologies? Maybe some fancy new endpoint security software?

Or maybe, just maybe, you ought to invest the lion's share of your IT security budget in the single biggest and most glaring security hole in your entire organization: your end users. If you did that, you'd be protecting your pricey IT infrastructure and the priceless information it contains better than all the other technology combined.

The Ernst & Young Global Information Security Survey last year revealed that end-user security training was the No. 1 problem inside large organizations. Yet less than half of the respondents said their companies had a formal training program to meet that threat.

How stupid is that?

Most companies feel that they've trained workers if they've sent them an e-mail with a list of do's and don'ts. Some include a five-minute bit of slideware as part of new-employee orientation. Neither approach is worth much. You might as well tell workers, "We just don't care that much about IT security. Do whatever you want."

Martin Bean, chief operating officer at New Horizons Computer Learning Centers, says companies "only pay lip service" to end-user security training. And, he adds, when he talks to the boards of directors at major companies about securing their IT infrastructures, "the toughest part of the conversation is about the need to retrain every single employee" to be secure computer users.

I know that IT likes to believe that all problems created by technology can be solved with more technology. In many cases, sad to say, it's true. But not this time. Technology is a small part of the security solution. People are the big part.

Before workers are given computers and passwords, they should be given at least a half-day, if not a full-day, tutorial about the ins and outs of secure computing practices as defined by your IT department. Dedicating precious time and resources to such a learning experience tells new workers (and existing ones) that you are very serious about IT security procedures. It's not lip service.

In those sessions, employees should learn about everything from phishing to the proper use of pass-

words. What's more, they ought to be told about the consequences of failing to be security-conscious corporate citizens.

That's right: consequences.

If workers flaunt security procedures, they should be punished. Although a network security administrator might think a firing squad is a worthy punishment, it's unlikely that the HR bigwigs will go along with the idea. But they might agree to some well-conceived consequences for a person's documented failures to keep your company's IT assets safe, such as writing passwords on Post-it notes and sticking them on moni-

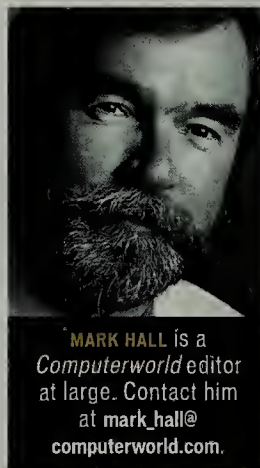
tors. I think the loss of one day of vacation for every security violation after the first breach seems fair. And it will get workers' attention. No one likes to lose vacation time. Once any employee has lost a week of vacation time, the next transgression should mean job termination.

The standard whine from end users about, say, complex passwords is, "It's too hard to remember the password. It's got numbers and characters in it." Of course it's difficult. That's the point. And, yes, you need to write it down. But you can put it in a safe place like maybe your wallet. You put money and credit cards inside a wallet,

so presumably you try to keep it safe. You carry a wallet in your pocket or purse. If you think it's too difficult for you to open your wallet, well, maybe a firing squad is in order.

I also think workers should be rewarded for keeping a company secure. For example, if the company goes a full year without getting infected by a virus, everyone gets an extra vacation day in the next calendar year.

My point here is that there's far too much emphasis placed on technology to solve a problem that's often controlled by individuals. You need to push your company from the CEO on down to redirect resources to train and retrain employees on their critical responsibility to maintain the security of your company's IT operations. If they're not involved, you're fighting a losing battle. **52486**



MARK HALL is a Computerworld editor at large. Contact him at mark_hall@computerworld.com.

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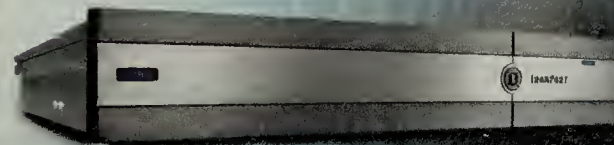
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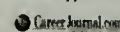
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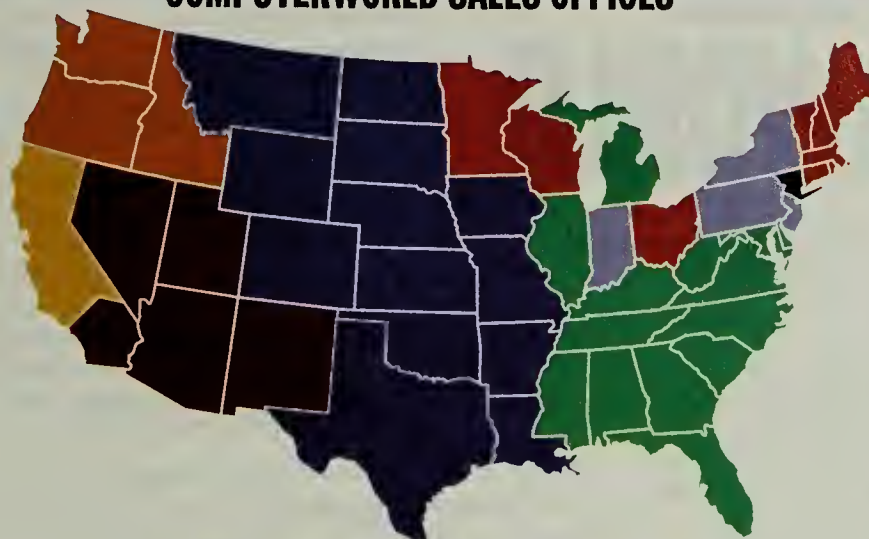
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Data Thefts

isolation, which he has yet to file as a bill, is similar to a proposed Corporate Information Security Accountability Act that was outlined two years ago by Rep. Adam Putnam (R-Fla.) but never formally introduced.

"It's really scary stuff," the financial services security analyst said. "Corzine's bill is certainly one of the most radical ones that have been proposed recently, and it has drawn a lot of concern."

There clearly are "undertones of the Sarbanes-Oxley model" in the proposal, said Erin Kenneally, a forensic IT analyst at the San Diego Supercomputer Center's Pacific Institute for Computer Security in La Jolla, Calif.

Lawmakers Step Up

Several other measures are already in front of Congress, including one that would set a national law requiring businesses and government agencies to notify affected individuals if databases are breached and their personal information is compromised (see chart).

Most of the legislative proposals have either emerged or been reinvigorated following a string of recent data-security snafus at companies such as ChoicePoint Inc., Bank of America Corp. and Reed Elsevier Inc.'s LexisNexis unit.

Like the other measures, Corzine's promised bill is a long way from becoming a law, and lawyers and analysts who focus on IT security stressed that there is no telling whether it can garner the needed support in Congress.

But the proposal reflects what appears to be a growing conviction among lawmakers that strong federal data privacy and information security guidelines are needed in the wake of the recent breaches, said Christopher Pierson, a

lawyer at Lewis and Roca LLP in Phoenix.

Stephen Wu, president of InfoSec Law Group PC in Mountain View, Calif., noted that bills such as Corzine's "often don't seem to get very far, except when things get so outrageous that action is forced on Congress."

For example, the financial reporting mandates built into the Sarbanes-Oxley Act followed a string of corporate accounting scandals, Wu said. He added that with the recent data lapses "all coming seemingly on the heels of one another, we are beginning to see the same sort of sentiment" about the need for more security requirements.

Unlike regulations for specific industries, such as those based on the Health Insurance Portability and Accountability Act and the Gramm-Leach-Bliley Act for financial ser-

vices, any new privacy laws may be much broader in scope, said Nahra, who is a lawyer at Wiley Rein & Fielding LLP in Washington.

Companies need to be prepared, said Michael Rasmussen, an analyst at Forrester Research Inc. "It really is all about starting to document your security practices and overall compliance" with existing requirements, Rasmussen said.

Companies need to classify their data and get a full understanding of both the process and technology measures that are in place for securing protected information, Rasmussen added. They also need to set policies for responding to and disclosing security breaches and focus on issues such as vulnerability management, employee training, communication and security awareness, he said. **53256**

DATA SECURITY BILLS

Consumer Privacy Protection Act

[H.R. 1263]

■ **Introduced by Rep. Cliff Stearns (R-Fla.) on March 10.** Requires data collectors to notify consumers that their personal information is being shared with other companies and to give them a chance to limit the amount of data being disclosed.

■ **Status:** Referred to the House Committee on Energy and Commerce.

Information Protection and Security Act

[S.500 and H.R. 1080]

■ **Introduced in both the Senate and House on March 10 by Sen. Bill Nelson (D-Fla.) and Rep. Edward Markey (D-Mass.).** Would give the Federal

Trade Commission the power to develop regulations on the sale of personal information.

■ **Status:** S.500 has been referred to the Senate Committee on Commerce, Science and Transportation. H.R. 1080 was referred to the House Subcommittee on Commerce, Trade and Consumer Protection.

Notification of Risk to Personal Data Act [S. 1350]

■ **Originally introduced by Sen. Dianne Feinstein (D-Calif.) in June 2003.** Would require businesses to notify affected individuals when their personal data is compromised.

■ **Status:** Resides with the Senate Subcommittee on Terrorism, Technology and Homeland Security. Hearings on the bill have been held.

University Computers Hacked on Each Coast

Boston College, Cal State say no personal data lost

BY LINDA ROSENCRANCE AND JAIKUMAR VIJAYAN

A computer used for fundraising activities at Boston College was hacked into this month, initially raising concerns that the Social Security numbers and other personal information of some 120,000 alumni might have been compromised.

Although BC alerted the affected alumni to the breach, the college is now sure that no personal data was stolen, said spokesman Jack Dunn.

The break-in was the second such incident reported last week by a university. Officials at California State University, Chico, disclosed that hackers

had broken into a housing and food service system containing information about 59,000 current, former and prospective students, faculty and staff, including their names and Social Security numbers.

A statement on the school's Web site said the intruders apparently installed rootkit software on the system for storing music, movie and game files. They also attempted to break into other university computers, the school said.

At BC, Dunn said the hacker planted a program that could be used to launch attacks against other computers.

The school's IT department discovered the security breach on a computer that was managed by a third-party vendor and located in BC's fundraising calling center, according to Dunn. He said that during rou-

tine monitoring of the university's computers, IT staffers noticed "a spike in activity on this particular computer."

The workers immediately took the machine off-line, secured it and launched a computer-forensics investigation, Dunn said. The investigation concluded that the computer wasn't targeted to access personal information but to allow the hacker to launch remote attacks, he added.

The IT team determined that the personal data stored on the system wasn't accessed, Dunn noted. Nevertheless, he said, "we decided to send out the precautionary advisories to all of our alumni on the computer, and we offered guidelines they should consider to ensure their privacy."

BC is now purging all Social Security numbers from the affected computer and will no longer use them as alumni identifiers, Dunn said. He said the school will institute a new identification system.

Dunn said BC has contacted

local law enforcement agencies but had not yet contacted state or federal authorities.

Officials at California State University are now notifying each person whose name and Social Security number was on the system, in accordance with state law. There is no indication that the hackers were targeting confidential information, school officials said.

The compromised system has been "rebuilt and secured" and has been put back onto the university's network, they added. It is now being reviewed by an outside security firm.

News of the breach comes just as the university has put in place plans to use a randomly assigned nine-digit ID number for students and employees instead of Social Security numbers. **53253**

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QuickLink k1600
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FRANK HAYES ■ FRANKLY SPEAKING

Secure EHR

NO ONE DISAGREES on the benefits of an electronic health record, just who should pay for the process of conversion," wrote one M.D. who read my column on EHR two weeks ago. "Most hospitals don't have the funds to support a massive conversion to all-EHR. So it's easy to have Mr. Hayes suggest a mandate. I'd just like to know, who will fund it?"

Hold that thought. Here's another reader: "There is another issue that I think holds things back, and that is worries about privacy. Anything on paper is, by definition, more private than anything in digital form, especially when most doctors use Microsoft products."

Now let's talk about Kaiser Permanente [QuickLink 53209].

Somehow, live data on 140 patients of the big HMO was posted to an internal development Web site, which became visible on the Internet.

An ex-employee says she was doing a Web search and found the patient data through a Google result. She filed a federal complaint that Kaiser had violated the Health Insurance Portability and Accountability Act and linked to the data in her weblog.

Now Kaiser is contacting the affected patients and seeking a restraining order against the ex-employee. The U.S. Office of Civil Rights, which enforces HIPAA, is looking into the mess. And suddenly, mandating electronic patient information doesn't sound like it's such a great idea, does it?

Maybe not. Or, just maybe, the right mandate might be a better idea than ever.

Let's be realistic: Electronic information can leak. It happened in recent months to Lexis-Nexis (data stolen on 32,000 people) and ChoicePoint (info on 145,000 people fraudulently purchased). Bank of America shipped backup tapes containing the credit card records of 1.2 million federal employees, including 60 U.S. senators, on commercial airlines in December — and they went missing, too.

Kaiser, which historically has been close to fanatical about patient privacy for its 8 million-plus members, hasn't been immune. In 2000, an IT staffer used a one-time script to clear an e-mail backlog. Result: Confidential information on 858 patients was sent to 17 other patients who weren't supposed to get that information.

Yes, electronic information can leak more easily than information on paper. And that's most likely to happen with one-off scripts or unauthorized demonstrations or lashed-together data pipes. When security and privacy are designed into a system and procedures are rigorously followed — and enforced by the system — leakage is a lot less likely.

How do you maximize security and privacy for, say, electronic health records? You design it in from the start in a standard way. You mandate encryption (and what kind), you specify authentication (and how it works), you nail down access control (and all the details). In short, you force an EHR standard.

That will take a mandate, whether from Medicare or HIPAA or some other 800-pound gorilla that can force the health care industry to comply. Without it, there will be no privacy-oriented EHR standard, and we'll end up with a thousand kinds of EHR, all lashed together with leaky pipes. Doing it right will require a lot less variety — and a lot more money.

And yes, to answer the doctor whose question kicked off this column, we already know who will pay for it. We all will, whether as patients or insurance buyers or taxpayers. Exactly how is up in the air. Incentives? Taxes? Higher medical bills? Free software? We don't know. But we know this: In the end, the money always comes from customers — from us.

And as long as we're paying for EHR, let's make sure we get a system with security and privacy built in from the ground up. **53215**



FRANK HAYES, Computerworld's senior IT columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

Enough With Winter Already!

Environmental sensor goes off on Monday at 8:25 a.m.: water in the computer room. But when help arrives, no water is to be seen. Wednesday it happens again; still no water. Maybe it's a bad sensor? Nope. "It snowed both days," pilot fish explains. "A tech had snow on his shoes, and it spread out just enough to set off the sensor. By the time we got there, the water was either gone or so small an amount that you couldn't see it. We taught him to stomp his feet on the way in, and the problem was solved."

Read?

Pilot fish clears up a problem with this user's out-of-office



'restart' - they're totally different! "

Um . . . No

message and explains to her that by sending a test message to herself, she set up an infinite loop. I'll add a note about that to the instructions for out-of-office messages, he tells her. User's response: "I'm not sure what 'instructions' you are referring to. Since many employees don't consult instructions if they believe they know how to perform a task, I urge you to send an Allusers message regarding this problem. Thank you."

Sysadmin pilot fish resets user's password and e-mails the user: "I have reset your password. New password: monday1." User replies promptly: "Thanks, but I'm not sure what you mean by your comment about Monday 1. Does that mean that my password can only be used on Monday, or that it will be reset on the first Monday of the month?"

Thanks a Lot

This bank's tellers have the latest in 1970s technology — but it's still in use in 2005, says a pilot fish there. One nice feature is the ability to store the teller transactions when the central mainframe isn't available, then forward them when the mainframe reconnects. "During a planning session to design state-of-the-art replacements for this ancient hardware, the lead designer suggested that the store-and-forward file be kept on the mainframe," fish sighs, "since that was more secure and had a larger storage capacity."

Everybody's An Expert

Troubleshooting this user's PC, pilot fish decides it's time to restart the machine. "Unfortunately, I asked him to reboot," fish says. "He quickly hit the reset switch, pleased at his prompt response. This crashed the several other applications still running in the background. When I asked him why he didn't just click Start and choose Restart, he sighed, 'You said reboot! That means power it off. You should have said

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